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June, 1982

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 79 No. 1

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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to this membership.

SCIENTIFIC ARTICLES

Proceedings 1

A Review of Reported Cases of Typhoid Fever and Documented Carriers in Arkansas 47
Paul C. White, Jr., M.D., Robert C. Walls, Ph.D., and Edward A. Gresham, M.D.

A Five Year Update On Rocky Mountain Spotted Fever in Arkansas 50
T. C. McChesney, D.V.M., J. P. Narain, M.D., and J. P. Lofgren, M.D.

Rubella Susceptibility in South Arkansas 56
Wayne G. Elliott, M.D.

FEATURES

ECG of the Month 58
John W. Watson, M.D.

Office Orthopaedics: "The Foot and Ankle: One Year's Experience: Part I" 59
I. Leighton Millard, M.D.

Medical Grand Rounds: "Raynaud's Syndrome" 63
Eleanor A. Lipsmeyer, M.D.

Editorial: "Vascular Disease" 67
Alfred Kahn, Jr., M.D.

From Other Years 69

Medicine in the News 69

Keeping Up 74

Things to Come 75

Personal and News Items 76

Obituary 77

New Members 78

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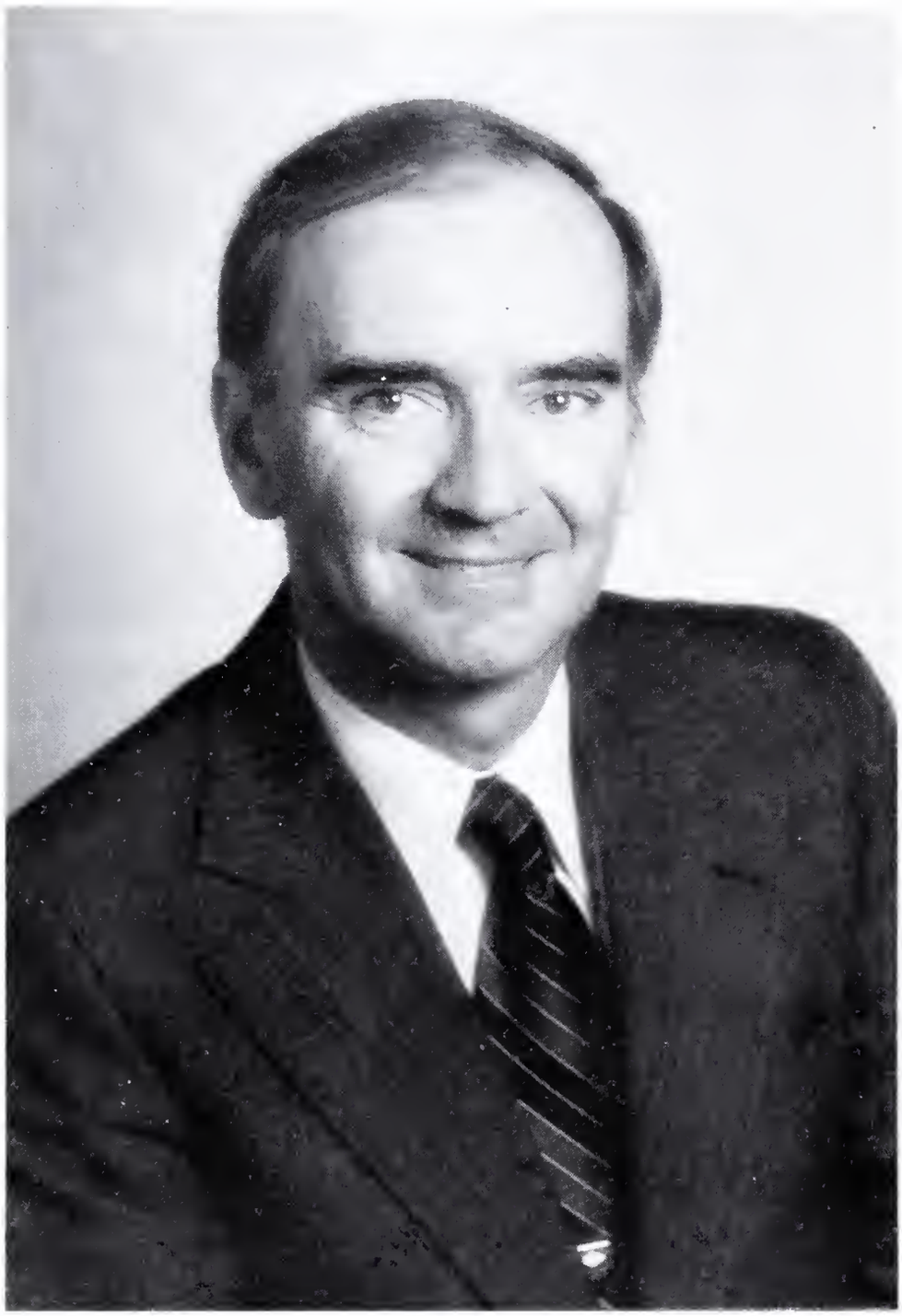
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1982-1983

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

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PROCEEDINGS

106th Annual Session

ARKANSAS MEDICAL SOCIETY

Hot Springs

April 29—May 2, 1982

First Session
HOUSE OF DELEGATES

The first meeting of the House of Delegates of the Arkansas Medical Society during the 1982 convention was called to order at 12:30 p.m. by Speaker Amail Chudy. Invocation was by Frank Morgan.

The executive vice president, C. C. Long, called the roll of delegates. The following delegates, officers and members seated as delegates by action of the House were present:

ARKANSAS, Gerald L. Guyer; ASHLEY, Donald L. Toon; BAXTER, John F. Guenthner; BENTON, Eugene H. Ball; BRADLEY, Kerry F. Pennington; CLARK, James T. Blackmon; COLUMBIA, Joe F. Rushton; CRAIGHEAD-POINSETT, B. P. Raney and Ray Hall; CRAWFORD, Millard C. Edds; CRITTENDEN, C. Herbert Taylor; DREW, Paul A. Wallick; FRANKLIN, David L. Gibbons; FULTON-IZARD-SHARP, Michael N. Moody; GARLAND, Edgar K. Clardy and Ronald J. Bracken; GREENE-CLAY, J. Darrell Bonner and J. Larry Lawson; INDEPENDENCE, Lloyd G. Bess; JACKSON, Ramon E. Lopez; JEFFERSON, R. Teryl Brooks, John Crenshaw, George V. Roberson and Banks Blackwell; JOHNSON, Boyce W. West; LAWRENCE, Ralph F. Joseph; LEE, Dwight W. Gray; LITTLE RIVER, James D. Armstrong; LONOKE, Fred C. Inman; MISSISSIPPI, Sybil Hart; MONROE, N. C. David, Jr.; NEVADA, Michael C. Young; OUACHITA, Robert H. Nunnally; PHILLIPS, Robert D. Miller; POLK, David D. Fried; POPE, Frank M. Lawrence; PULASKI, Charles W. Logan, Robert F. Shannon, Kelsy J. Caplinger, III, John McCollough Smith, Edgar J. Easley, Gordon P. Oates, Harold D. Purdy, Arthur E. Squire, Jr., Warren M. Douglas, Fred O. Henker, C. Reid Henry, Edwin Hankins, III, William J. Morton, Warren C. Boop, Jr., Paul J. Cornell, Guy R. Farris, Charles H. Crocker, Harold G. Hutson, Gene L. France, Charles H. Rodgers, J. Mayne Parker and Raymond V. Biondo; SEBASTIAN; Carl L. Williams, Kenneth K. Wallace, McDonald Poe, A. C. Bradford, A. Samuel Koenig, J. David Busby, Morton C. Wilson and Maurice C. Martin; UNION, Willis M. Stevens and Wayne G. Elliott; WASHINGTON, Lee B. Parker, John W. Vinzant and Ely Brooks; WHITE, R. D. Rasberry and Kenneth R. Meacham; Yell, James L. Maupin; COUNCILORS, Merrill J. Osborne, Asa A. Crow, Jim Lytle, John E. Bell, John Hestir, L. J. P. Bell, Lloyd G. Langston, John P. Burge, George Warren, Cal R. Sanders, F. E. Joyce, C. Lynn Harris, R. Jerry Mann, W. Ray Jouett, William N. Jones, Richard N. Pearson, Rhys A. Williams, Charles F. Wilkins and Ken Lilly; PRESIDENT, Purcell Smith, Jr.; PRESIDENT-ELECT, Morriss M. Henry; FIRST VICE PRESIDENT, Frank E. Morgan; SPEAKER OF THE HOUSE, Amail Chudy; VICE SPEAKER, Pat Phillips; SECRETARY, Elvin Shuffield; TREASURER, James M. Kolb, Jr., PAST PRESIDENTS, Charles R. Henry, Joe Verser, C. R. Ellis, Ross Fowler, Robert Watson, Ben N. Saltzman, A. S. Koenig, Jr., W. Payton Kolb, George F. Wynne, A. E. Andrews and Kemal Kutait.

Speaker Chudy asked for the report of the Credentials Committee. The committee chairman, Dwight Gray, reported that a quorum was present.

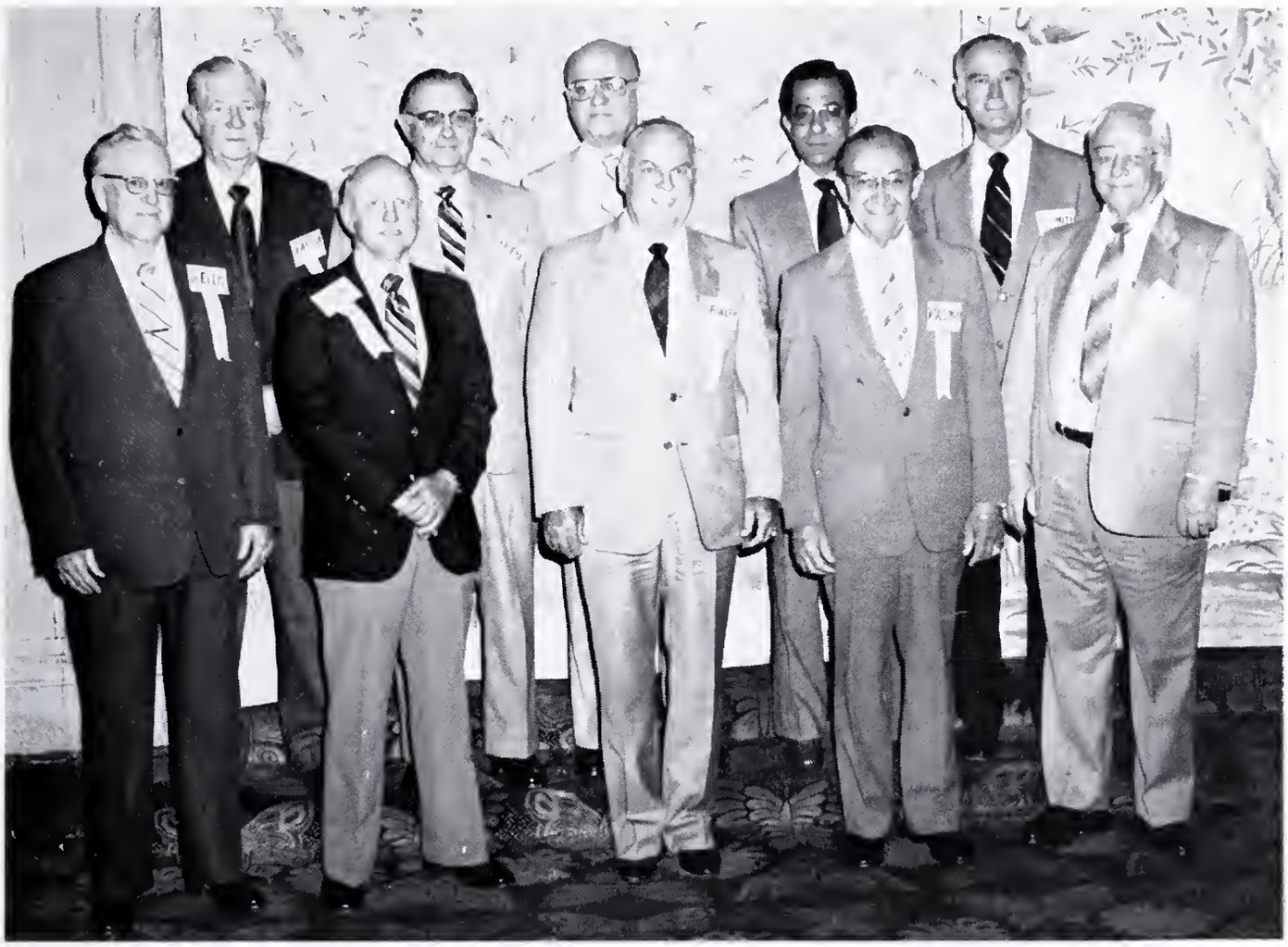
Dr. Chudy recognized President Purcell Smith

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY 1982-1983



Seated, left to right: Councilors Harold Purdy, Charles Logan, John Hestir, Cal Sanders, Secretary Elvin Shuffield, President Morriss Henry, President-elect Asa Crow, Chairman of the Council John P. Burge, Treasurer James M. Kolb, Jr., Second Vice President A. Samuel Koenig, and First Vice President Paul A. Wallick.
Standing, left to right: Past President C. R. Ellis, Third Vice President Gerald Guyer, Councilors Ronald Bracken, J. Larry Lawson, M. J. Osborne, William N. Jones, Frank Morgan, Lloyd Langston, Ray Jouett, John Bell, Speaker Amail Chudy, Councilors L. J. Pat Bell, Charles Wilkins, Richard Pearson, Ken Lilly, Jim Lytle, Past President A. E. Andrews, Immediate Past President Purcell Smith, Jr., Councilors Rhys Williams and James Armstrong, Vice Speaker W. P. Phillips, and Councilor F. E. Joyce.

Past Presidents of the Arkansas Medical Society



Former presidents of the Arkansas Medical Society who were present for the breakfast in their honor hosted by the Society were (left to right) C. R. Ellis, Robert Watson, A. E. Andrews, A. S. Koenig, George F. Wynne, Ross Fowler, Kemal Kutait, Ben N. Saltzman, Purcell Smith, Jr., and Payton Kolb.

who introduced Frank J. Jirka of Berwyn, Illinois. Dr. Jirka is a member of the Board of Trustees of the American Medical Association. Dr. Jirka addressed the House on recent activities of the AMA.

Speaker Chudy introduced Mrs. J. Edward Hill, Hollandale, Mississippi. Mrs. Hill, who is chairman of the Health Projects Committee for the AMA Auxiliary, spoke on the potential of Auxiliary members.

Dr. Chudy then introduced Mrs. Keith D. Jones of Warrensburg, Missouri, who is president of the Southern Medical Auxiliary. Mrs. Jones issued an invitation to the 1982 Fall Southern Medical Association meeting and outlined recent programs of the SMA.

Mrs. Raymond Peeples, president of the Arkansas Medical Society Auxiliary, was introduced by Speaker Chudy. Mrs. Peeples reviewed the projects and accomplishments of the State Auxiliary during the past year and thanked the Society members for their support.

The Speaker then introduced Mrs. C. Herbert Taylor, president-elect of the Arkansas Medical Society Auxiliary. Mrs. Taylor outlined plans for the Auxiliary for the 1982-83 year.

Purcell Smith, Jr., of Little Rock was introduced by Speaker Chudy for his President's Address. (Dr. Smith's address appears following the minutes.) The members of the House of Delegates gave Dr. Smith a standing ovation.

Following his address, Dr. Smith asked Thomas Bruce, Dean of the University of Arkansas College of Medicine, and Mrs. Larry Lawson, Auxiliary AMA-ERF chairman, to come to the podium. Dr. Smith presented a check to Dean Bruce on behalf of the American Medical Association Education and Research Foundation. The AMA-ERF grant was in the amount of $16,562.48. Dr. Smith expressed thanks to Mrs. Lawson and mem-

Fifty Year Club Officers



John McCollough Smith of Little Rock (seated) is the new president of the Fifty Year Club of the Arkansas Medical Society. Max McAllister of Fayetteville (standing) is the secretary of the club.

bers of the Auxiliary for hard work in support of AMA-ERF. Dean Bruce added his thanks to the Auxiliary for their work over the years for AMA-ERF and the benefit the school received.

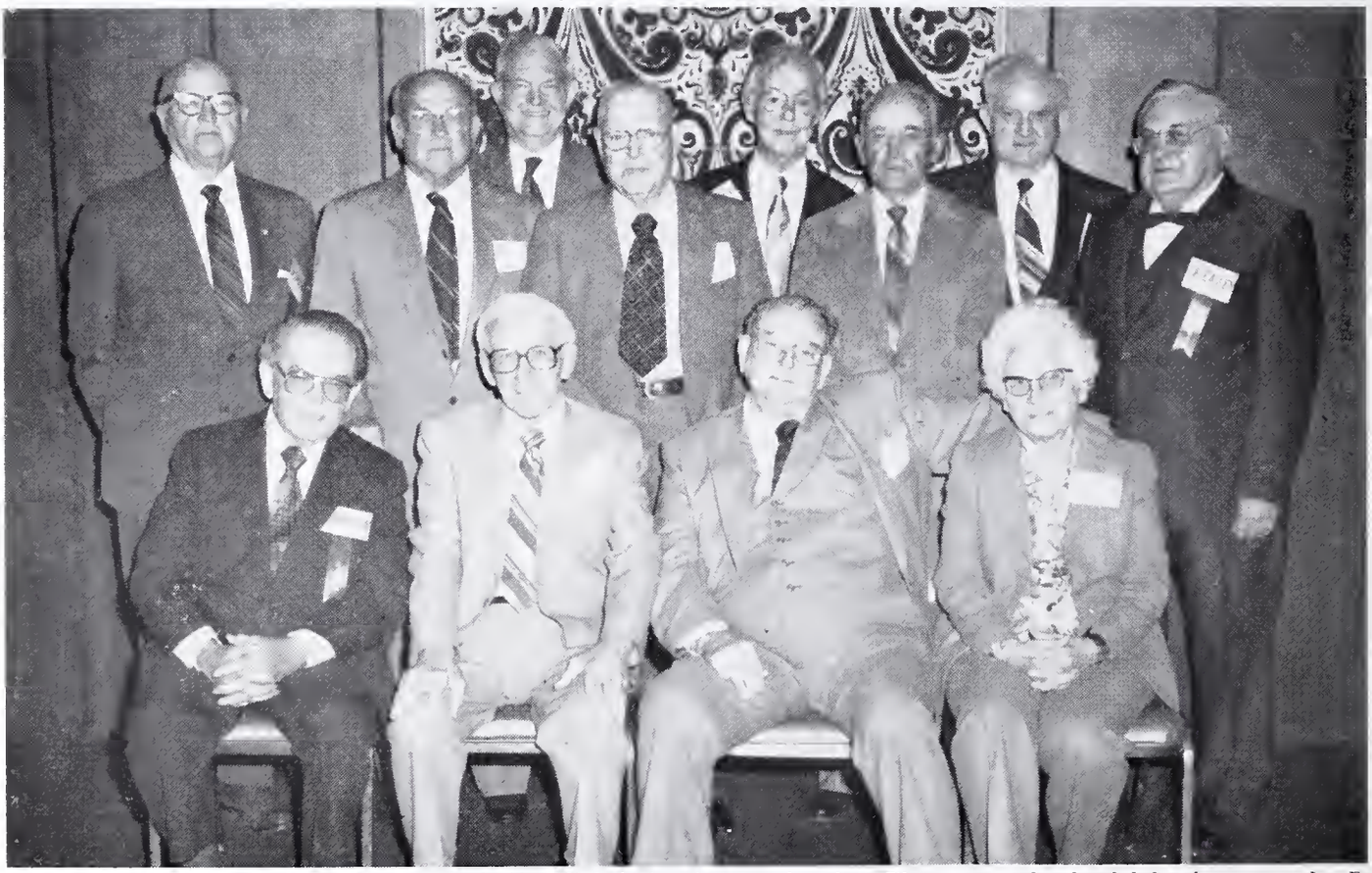
Vice Speaker Pat Phillips recognized Joe Verser, secretary of the Arkansas State Medical Board, for a presentation. Dr. Verser presented a plaque to Ross Fowler of Harrison expressing appreciation for his sixteen years of service on the Medical Board. Dr. Fowler was serving as president of the Board at the time his term on the Board expired. Dr. Fowler expressed his appreciation for the privilege of working with the members of the State Medical Board.

Upon motion of Morriss Henry, the House approved minutes of the 1981 Annual Session as published in the June issue of the Society Journal.

John P. Burge, chairman of the Council, made a supplementary report to the House on actions of the Council since publication of the annual report. The report was referred to Reference Committee Number Two, along with the original report. (The report is published elsewhere in this issue.)

Vice Speaker Phillips called for reports from committees. A. S. Koenig, Jr., chairman of the

Fifty Year Club Luncheon



The Society hosted a luncheon meeting for the Fifty Year Club during the annual session. Those present for the club luncheon were: Joe F. Rushton, W. A. Ellis, Jr., James D. Kinley, Frances Rothert, John McCollough Smith, Vincent O. Lesh, Fred Henker (speaker), Max McAllister, Charles R. Henry, Van C. Binns, Robert Paul Hughes, and Edgar Easley.



Morriss Henry, Fayetteville, President of the Arkansas Medical Society for 1982-83, and Asa Crow, Paragould, president-elect of the Society.



Principal officers of the Society for 1982-83: (seated, left to right) Morriss Henry, President; Asa Crow, President-elect; (standing, left to right) Elvin Shuffield, Secretary; John P. Burge, Chairman of the Council, Purcell Smith, Jr., Immediate Past President, and James M. Kolb, Jr., Treasurer.



Asa Crow is unanimously elected to the position of president-elect of the Arkansas Medical Society. In the background, John Bell requests privilege of escorting Dr. Crow to the podium.



Dr. Crow expresses appreciation to the House of Delegates for honor of serving as president-elect of the Society.



Dr. and Mrs. Frank Jirka and Dr. and Mrs. Purcell Smith enjoy the Western Party on Friday evening.

Constitutional Revisions Committee, presented the report of his committee. The report included some new proposals for revisions of the Constitution and Bylaws. The changes would (1) clarify seating of members of a county society as delegates to the House of Delegates, and (2) extend membership to Doctors of Osteopathy. Dr. Koenig's report was referred to Reference Committee Number One.

Dr. Phillips then called for old business. Amendments to the Constitution and Bylaws which were approved by the House on first reading in 1981 were presented for final consideration by the House. The House adopted the revisions, as follows:

APPROVED CHANGES IN THE CONSTITUTION AND BYLAWS

Constitution Article VI. Council

Section 3. Executive Committee

The chairman of the Council, the president, the president-elect, the secretary, and *the immediate past president* shall constitute the Executive Committee of the Council. The Chairman of the Council shall serve as Chairman of the Executive Committee. The Executive Committee shall have such powers and duties as provided in the Bylaws and as may be defined from time to time by resolution of the Council.

(Note: The words in italic are additions to this section.)

Bylaws. Chapted V. Election of Officers

Section 1. Nominating Committee

(A) Prior to adjournment of the first meeting of the House of Delegates at each Annual Session, the delegates from the component societies of each councilor district shall meet, the councilor not subject to reelection acting as chairman, and select one delegate from each district to form a committee on nominations. This committee shall consist of ten delegates, one from each councilor district. It shall meet and organize by selecting a chairman and a secretary. It shall be the duty of this committee to consult with members of the Society and to hold one or more meetings at which time the best interest of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the

result of its deliberations to the (delete: House of Delegates) *headquarters office no later than February 1* in the shape of a ticket containing the names of two or more members for the office of president-elect and of one member for each of the other offices to be filled at (delete "that") *the* Annual Session.



The new president, Morriss Henry, is congratulated by the new president- elect, Asa Crow.



Frank Jirka, member of the Board of Trustees of the American Medical Association, addresses the House of Delegates.



Purcell Smith, Jr., Society President for 1981-82, makes his President's Address to the House of Delegates.



Speaker Amail Chudy presiding at the opening session of the House of Delegates.



Dr. and Mrs. Purcell Smith, Jr., Little Rock. Dr. Smith was 1981-82 President of the Society.

No two candidates for president-elect shall be named from the same county.

Delete: (B) The report of the Nominating Committee shall be the first order of business of the House of Delegates, after reading of the minutes, on the last day of the Annual Session.

Chapter V. Section 5. (Election of Officers)

The election of officers shall be the (delete: "second") *first* order of business of the House of Delegates on the last day of the Annual Session.

(Note: Words in italic are additions to the present sections.)

Members of the House held district meetings on the floor to select members of the Nominating Committee. Elected to represent their districts on the committee were:

1. Richard Martin, Paragould
2. John Hestir, DeWitt
3. George Warren, Smackover
4. A. E. Andrews, Texarkana
5. Pat Phillips, Fort Smith
6. James M. Kolb, Jr., Russellville
7. John W. (Bill) Vinzant, Fayetteville
8. Frank Morgan, North Little Rock
9. Charles Logan, Little Rock
10. Gordon Oates, Little Rock

Speaker Chudy announced that the meeting times for the reference committees had been adjusted so that all members of the Society would be able to participate in the hearing of Reference Committee Number Two. He announced that Reference Committee Number Two would hold its hearing following adjournment of the House and that the two other reference committee hearings would be held after the hearing of Committee Number Two.

Vacancies on the State Board of Health were announced and Speaker Chudy requested that members from the districts involved meet immediately following the House session. An at-large vacancy on the State Medical Board was also announced.

The House recessed 2:10 p.m.

PRESIDENT'S ADDRESS
PURCELL SMITH, JR.

It is customary for the president of the Arkansas Medical Society to report to the House of Delegates on the activities during his year as president; I am pleased to do this. The past year, as expected, has been busy and interesting, challenging, and frustrating. I will make no attempt to cover every event and activity of the year, but I do wish to report on a number of them.

First, I wish to express appreciation to the members of the Society for their cooperation and willingness to serve on important committees—it has been possible to disagree on certain issues and still work closely on various projects. This is very important. We must have this spirit of cooperation again next year, in order to address the many challanges that will face us.

The relationship between the Arkansas Medical Society and the Department of Health has been strained for several years and meaningful communication has been almost non-existent. For the past year, Dr. Ben Saltzman has been director of the Health Department and good communication has been re-established. Ben has met with the Executive Committee on several occasions, has attended Council meetings and has made active effort to identify and address problems between the practicing physicians and the Health Department—for this effort, we thank you, Ben.



Receiving line for the Council reception Saturday evening were members of the Executive Committee and their wives—Dr. and Mrs. Morriss Henry, Dr. and Mrs. Purcell Smith, Dr. and Mrs. Elvin Shuffield, and Dr. and Mrs. John P. Burge.

The Committee on Position Papers, to develop Society policy statements on a number of issues, has continued its excellent work. Established as an ad hoc committee, it has become a permanent committee to formulate new policy statements and review existing ones. Some of the statements have already been approved—you will act on several at this meeting. The committee, with Jim Kolb as chairman, deserves our thanks for a job well done.

In the past we have not been as active as we should be in the area of public relations. I am pleased to report that our Public Relations Committee, with Milton Deneke as chairman, has been active and innovative in this very important area. As a result of this committee's activities, the Society held public relations seminars, offered by AMA, in various locations around the State for personnel in the front office of practicing physicians. The Society underwrote a portion of the expense; they were well attended and well received, and the committee is working on making these seminars, and possibly others, available again this year. Starting with this Annual Session, news media interviews are being scheduled for our scientific speakers. Beginning in 1983, a lay-recognition award will be presented at the Annual Session. I applaud these public relations endeavors.

One year ago, I expressed to you the concern that is mounting in business and industry regarding the cost of health care in the United States and the rate of increase in that cost. Increases in the cost of the corporate health-care benefit package in the range of 15-30% per year are not unusual now. In past years, the traditional attitude of business and industry was to consider these costs as uncontrollable, pay little attention to them, and simply incorporate these costs into the price of their product. With corporate profits severely pinched in the current economy, that attitude has changed. Health-care costs are no longer considered uncontrollable—more and more is written about it in the business literature, and numerous organizations such as coalitions are springing up around the country, to address health-care costs. Unfortunately, a large number of these coalitions specifically exclude physicians and other providers.

Last July, your Council appointed a Medicine-



Dr. and Mrs. Morriss M. Henry, Fayetteville. Dr. Henry is Society president for 1982-83.

Business Coalition Committee. That committee has met on several occasions and accumulated background information. We met with representatives of several larger employers in the Central Arkansas area and had a very useful exchange of concerns. The business representatives were pleased that we were taking the initiative. It is interesting that the subject that got the most discussion was on-the-job injuries, and sickness and accident benefits. Business feels that physicians are too free with time off from work and do not utilize light duty enough; they expressed great distress at not being able to get a written report from the physician or even reach him by phone. (Milton, maybe this is public relations!!!) Similar meetings with business and industry representatives in three or four other areas of the State are in the planning stage. Whether a formal coalition results, or a less structured body, continuation of this dialog is essential.

In a related activity, it has been my pleasure to serve on the Arkansas Commission on Health Care Cost Effectiveness. It is an independent commission of about thirty persons, four of whom are physicians. The commission has been meeting for a little over a year, and its report should be final within the next two or three months. It is addressing all aspects of health care costs—it will make its report and recommendations but will not be an implementing body to carry out its recommendations. Some group must review the recommendations for possible implementation.

A few weeks ago, I was one of a group of State Society representatives who went to Washington to visit our Congressional Delegation. Staff from the AMA Washington office met with us for an excellent briefing on current issues—they were most helpful and one of them went with us to some of the offices. Each member of the Congressional Delegation was friendly and cordial; we had a pleasant visit. We had no burning issue to bring to their attention—we did encourage legislative action to resolve the dilemma of Federal Trade Commission authority to regulate voluntary associations such as AMA; the Supreme Court decision on the issue of physician advertising resulted in a four-to-four tie vote, leaving standing a lower court decision upholding the FTC. Senator Bumpers is already involved in related legislation—S1080, the so-called Bumpers' amendment, which would provide that a reviewing court could not accord any presumption in favor of or against an agency action; thus the agency and the challenger would be on an equal footing before the courts.

During the course of the year, I had the opportunity to attend three councilor district meetings —there were only three that invited me. These meetings gave your president the opportunity to learn the concerns of the membership and the invitations were appreciated.

The AMA Leadership Conference is almost a must for the president and the president-elect of our Society—we had eight persons at the recent Leadership Conference in Chicago. I would encourage county societies to consider this conference for their leaders—it is excellent update on legislative and socio-economic issues.

To turn to internal matters for a moment, resolution of the difficulties associated with the employee retirement plan continues to be elusive. The Board of the Pension Plan, with Tom Ed Townsend as chairman, has reported to the Council on several occasions; Mike Mitchell has devoted much time to making certain our plan is properly funded, meets legal requirements, and



Joe Verser, secretary of the Arkansas State Medical Board, presents a plaque to Ross Fowler in appreciation of his sixteen years of service to the Board.



On behalf of the American Medical Association Education and Research Foundation, the Society president, Purcell Smith, presents a check for $16,562 from AMA-ERF to Thomas Bruce, Dean of the University of Arkansas College of Medicine. Mrs. Larry Lawson, Auxiliary AMA-ERF Chairman was present for the presentation. Both Dr. Smith and Dr. Bruce thanked Mrs. Lawson and the Auxiliary for their continued efforts for AMA-ERF.

meets our prior commitments to employees. Hopefully, a satisfactory solution is not far away.

I wish to take this opportunity to thank our Society staff for their assistance and cooperation this past year. They were always most helpful. Most of the time they anticipated my needs and requests before I voiced them. They do their job, and they do it well!!

I would be remiss if I did not touch on one other matter—that of the proposed realignment of Councilor districts. A year ago, the House of Delegates instructed the Council to redistrict itself prior to the annual spring meeting in 1982. A committee was appointed consisting of the senior councilor from each of the ten districts, plus the first vice president, Frank Morgan, as chairman. The context in which this charge was given was the debate over increased representation on the Council for districts with larger numbers of physicians. I wish to thank this committee for taking on a very difficult assignment; the recommendation of the committee, with slight modification, was approved by the Council at its meeting on March 28th. It is my hope that the House of Delegates will ratify this action of the Council. I ask each member of the House of Delegates to consider this matter, keeping in mind the best interest of the Arkansas Medical Society. I realize that your interpretation of the best interest of the Arkansas Medical Society and my interpretation may be different. But let us consider the issue and not be swayed by personalities and prejudice and bias. What is the issue? If I were from a less populous county or district, I might state the issue as, "Is it in the best interest of the Arkansas Medical Society for any group of physicians in a relatively small geographic area to have a significant influence on policies, programs, and plans of the Society?" If I were from Pulaski County, I might state the issue as, "Is it in the best interest of the Arkansas Medical Society for any group of its member physicians not to have proportionate representation on the Council, which conducts most of the business of the Society, since the House of Delegates meets only once, or sometimes twice, yearly?"

I do not mean to take the privilege of the pulpit to discuss the pros and cons—that is your prerogative and responsibility. But I would like to possibly put it in context for you. A passage of scripture may help to put our problem in perspective. The House of Delegates will be in session this Sunday morning—you may miss your Sunday worship service, so I will read a passage to you. It is Revelation 16:12-16. Listen to the written word:

"12. *And the sixth angel poured out his vial upon the great river Euphrates; and the water thereof was dried up, that the way of the kings of the east might be prepared.*

13. *And I saw three unclean spirits like frogs come out of the mouth of the dragon, and out of the mouth of the beast, and out of the mouth of the false prophet.*

14. *For they are spirits of devils, working miracles, which go forth unto the kings of the earth and of the whole world, to gather them to the battle of that great day of God Almighty.*

15. *Behold, I come as a thief. Blessed is he that watcheth, and keepeth his garments, lest he walk naked, and they see his shame.*

16. *And he gathered them together into a place called in the Hebrew tongue Armageddon."*

This passage does not rank with the eighth chapter of Romans, the Twelfth Chapter of Romans, or the fourth chapter of John, but it may have a message for us. Few people profess to fully understand the Book of Revelation—I am not one of those few. The word "Armageddon" does not appear elsewhere in the Bible, and does not appear in earlier Jewish writings. The passage appears to be referring to the ultimate battle of good against evil, with good emerging triumphant. Ours is not an "Armageddon" decision—those who vote as I do will not represent all of the forces of good. Those who vote opposite will not represent the amassed forces of evil. The day after the vote is taken, and the decision is made, the sun will rise, the birds will sing, the flowers will bloom, with a little good fortune, we will have a beautiful spring day—and the same problems, opportunities, and challenges will confront the Arkansas Medical Society. At its best, honorable persons will be expressing honest differences of opinion—at its worst, personalities and prejudices will make it impossible to vote the issue.

We will need strong leadership in the coming year—you have made a good choice in Morriss Henry. He must have our support and assistance and advice—I pledge that support to Morriss, and ask you to do the same.

I thank you for the honor of serving as your president—I wish you well in your deliberations.

CANDID SHOTS FROM THE COUNCIL RECEPTION







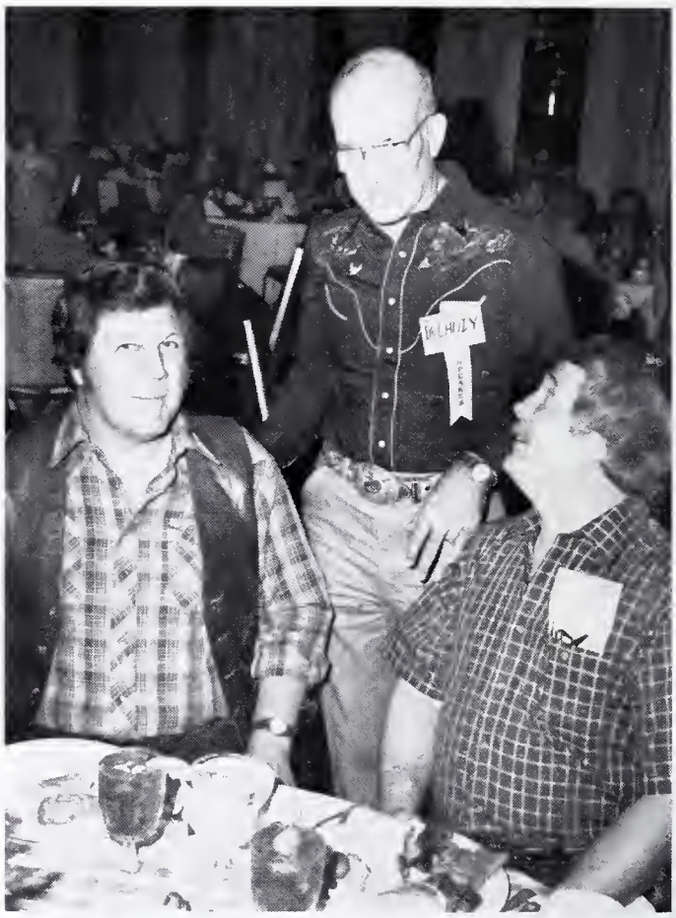






CANDID SHOTS FROM THE WESTERN PARTY













CANDID SHOTS FROM THE WESTERN PARTY













REPORTS AND RESOLUTIONS NOT PRINTED PRIOR TO MEETING

SUPPLEMENTAL REPORT OF THE COUNCIL

John P. Burge, M.D., Chairman

The Council met on Sunday, March 28, 1982, in the Camelot Inn in Little Rock and conducted business as follows:

1. President Purcell Smith reported on activity of the Medicine-Business Coalition and asked approval for the Society to host a luncheon for a meeting with business leaders on April 7th. The Council approved expense for the luncheon.
2. Vice Speaker Pat Phillips reported for officers attending the Leadership Conference of the American Medical Association. He advised the Council that many of those attending the conference were officers of county medical societies; he recommended that county societies consider sending representatives to the leadership conference.
3. Mr. Mitchell reported to the Council on the status of the suit by the Arkansas State Nurses Association. He advised that the authority of the Arkansas State Medical Board to pass regulation 10 must be decided by the Arkansas State Courts before the case can be heard in Federal Court.
4. Frank Morgan reported for the Councilor Redistricting Committee, resubmitting the proposal previously presented for redistricting and moving its adoption. President Purcell Smith presented an alternate proposal. The Council adopted the councilor redistricting proposal as submitted by Dr. Smith. The vote was 11 to 10. Chairman Burge expressed appreciation to Dr. Morgan and his committee for their work on a difficult committee assignment.
5. The Council approved contribution of $300 to Med Camps of Arkansas for two campers for one week for 1982.
6. The chairman of the Budget Committee, Rhys Williams, reported on the committee's study of the cash reserves of the Society. He referred to information received from Baird, Kurtz and Dobson and provided by the executive vice president. Based on that data, the Budget Committee recommended to the Council that it endorse the current dues structure and that the cash position of the Society be made clear to the Long Range Planning Committee so they may take it into consideration for future plans. A motion by Langston to accept the committee report and limit cash reserves of the Society to a one-year operating budget was defeated by vote of 11 to 7. The Council adopted the recommendation of the Budget Committee as presented. A subsequent motion by Jones for reconsideration was defeated 10 to 8.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON CANCER CONTROL

John Broadwater, M.D., Chairman

The Committee on Cancer Control presents the following recommendations for approval by the Society:

The Arkansas Medical Society endorses the Cancer Program, Commission on Cancer, American College of Surgeons.

The Arkansas Medical Society encourages all hospitals in Arkansas with 100 or more beds to seek to establish such a program, to work for the approval of that program, and to participate in data collection studies as sponsored by the American College of Surgeons.

The Committee feels that there has been a definite improvement in cancer care in those instances where the full Tumor Registry program is utilized within a community hospital.

The key features of the American College of Surgeons program are:

1. An institutional-wide Cancer Registry
2. Multi-disciplinary educational cancer conferences
3. Consultation services, particularly geared toward providing multi-disciplinary consultations
4. A system for quality of care evaluations for cancer patients

COMMITTEE ON PUBLIC RELATIONS

Milton Deneke, M.D., Chairman

The primary activity of the Public Relations Committee of the Arkansas Medical Society this past year has been the sponsorship of regional workshops on public relations for the physicians' office employees. Seminars were held as follows:

Little Rock	September 22, September 23, November 13
El Dorado	September 24
Fayetteville	October 13
Fort Smith	October 14
Jonesboro	October 15
Russellville	November 14



Members of the family of President Morriss M. Henry in attendance at the maugural ceremony on May 2, 1982.

The committee feels these seminars were well received and plans to repeat similar seminars during the next year.

In addition to the public relations seminars, we are presently considering regional seminars on practice management, claims processing and investments for physicians.

Future activities of the Public Relations Committee include:

1. Creation of an annual award to be given at each annual session of the Society to an individual in Arkansas who has done most to further the cause of medicine in our State during the preceding year.
2. Meeting with representatives of the Arkansas media to show our appreciation for the media and to become better acquainted with media representatives.

RESOLUTION
FROM PULASKI COUNTY MEDICAL SOCIETY
Re: Ambulances As Emergency Vehicles

WHEREAS, some twenty years ago, through the efforts of the Pulaski County Medical Society and other interested organizations including local law enforcement agencies, an amendment was made to a Little Rock City ordinance which eliminated ambulances as emergency vehicles; and

WHEREAS, this ordinance has been most effective in reducing the number of ambulance-involved accidents as well as fatalities in such accidents; and

WHEREAS, a study made at that time indicated that only a minimum amount of time could be gained in transporting patients to hospitals by permitting ambulances to operate as emergency vehicles; and

WHEREAS, often patients being transported by speeding ambulances were further injured by this type of conveyance to local hospitals; and

WHEREAS, in all these years, no evidence has been presented that any patient was harmed by this ordinance and a special police escort has always been available when necessary; and

WHEREAS, in recent months, local courts have ruled that an Arkansas Law which describes ambulances as emergency vehicles supercedes the city ordinance, having the effect of nullifying the ordinance; and

WHEREAS, it is felt that there is support in the Arkansas Legislature for amending the State

law to allow the Little Rock City ordinance to be reinstituted;

BE IT THEREFORE RESOLVED:

THAT, the Arkansas Medical Society go on record as favoring an amendment to the State law to allow the Little Rock ordinance to be reinstituted and;

THAT, this matter be referred to the Legislative Committee of the Arkansas Medical Society with the recommendation that its efforts be spent on seeking the enactment of such an amendment.

FINAL SESSION

HOUSE OF DELEGATES

Sunday, May 2, 1982

Speaker Amail Chudy called the House to order at 10:00 a.m. on Sunday, May 2, 1982. Invocation was by Payton Kolb.

Executive Vice President C. C. Long called the roll of delegates. The following delegates, officers, and members seated as delegates by action of the House were present:

ARKANSAS, Gerald L. Guyer; ASHLEY, Donald L. Toon; BAXTER, John F. Guenthner; BENTON, Michael C. Reese and Eugene H. Ball; BRADLEY, Kerry F. Pennington; CHICOT, P. Sinlar; CLARK, James T. Blackmon; COLUMBIA, Joe F. Rushton; CRAIGHEAD-POINSETT, James M. Robinette; CRAWFORD, Millard C. Edds; CRITTENDEN, C. Herbert Taylor; DREW, Paul A. Wallick; FRANKLIN, David L. Gibbons; FULTON-IZARD-SHARP, Michael N. Moody; GARLAND, Edgar K. Clardy, Ronald J. Bracken, Gaither C. Johnston and J. Richard Gardial; GREENE-CLAY, J. Darrell Bonner and J. Larry Lawson; HOT SPRING, Russell W. Cobb; JEFFERSON, R. Teryl Brooks, John Crenshaw, George V. Roberson and Banks Blackwell; JOHNSON, Boyce W. West; LAWRENCE, Ralph F. Joseph; LEE, Dwight W. Gray; LITTLE RIVER, James D. Armstrong; MILLER, Paul Meredith; MISSISSIPPI, R. Scott Fergus; MONROE, N. C. David, Jr.; NEVADA, Michael C. Young; PHILLIPS, Robert D. Miller; POLK, David D. Fried; POPE, Jim Kolb and Frank Lawrence; PULASKI, Charles W. Logan, Robert F. Shannon, Kelsy J. Caplinger, III, John McCollough Smith, Edgar J. Easley, Gordon P. Oates, Reid Henry, Harold D. Purdy, Arthur E. Squire, Jr., Warren M. Douglas, Fred O. Henker, Carlos A. Araoz, Edwin Hankins, III, William J. Morton, Warren C. Boop, Jr., Paul J. Cornell, Charles H. Crocker, Harold G. Hutson, David L. Barclay, Charles H. Rodgers, J. Mayne Parker and Raymond V. Biondo; SEBASTIAN, Carl L. Williams, Kenneth K. Wallace, McDonald Poe, A. C. Bradford, A. Samuel Koenig, J. David Busby, Morton C. Wilson and Maurice C. Martin; SEVIER, Joseph B. Pierce; ST. FRANCIS, E. Morgan Collins, Jr.; UNION, Robert R. Sykes and Willis M. Stevens; VAN BUREN, John A. Hall; WASHINGTON, Lee B. Parker, John W. Vinzant and W. Ely Brooks; WHITE, R. D. Rasberry and Kenneth R. Meacham; YELL, James L. Maupin; COUNCILORS, Merrill J. Osborne, Asa A. Crow, Jim Lytle, John E. Bell, John Hestir, L. J. P. Bell, Lloyd G. Langston, John P. Burge, George Warren, Cal R. Sanders, F. E. Joyce, C. Lynn Harris, W. Ray Jouett, William N. Jones, Richard N. Pearson, Rhys A. Williams, Charles F. Wilkins and Ken Lilly; PRESIDENT, Morriss M. Henry; FIRST VICE PRESIDENT, Frank M. Morgan; SPEAKER OF THE HOUSE, Amail Chudy; VICE SPEAKER OF THE HOUSE, Pat Phillips; SECRETARY, Elvin Shuffield; PAST PRESIDENTS, Charles R. Henry, C. R. Ellis, Robert Watson, Ben N. Saltzman, A. S. Koenig, Jr., W. Payton Kolb, George F. Wynne, A. E. Andrews, Kemal Kutait and Purcell Smith, Jr.

John P. Burge was recognized by Vice Speaker Phillips. Dr. Burge moved suspension the rule requiring that the election of officers be the first order of business so that the House could consider the reports of Reference Committees #2, #1, and #3 in that order. The House voted approval of the suspension of rules.

Speaker Chudy recognized A. E. Andrews, chairman of Reference Committee Number 2, who gave the following report:

REPORT OF
REFERENCE COMMITTEE NUMBER TWO

The members of Reference Committee Number Two were John Hestir, J. Darrell Bonner, Warren Boop, Banks Blackwell, Kelsy Caplinger, and myself as chairman. Rickey Medlock was the medical student observer on this committee.

Mr. Speaker and members of the House of Delegates, your Reference Committee Two held an open hearing attended by a majority of the members of the House of Delegates. The committee makes recommendations as follows:

1. *Item 4 of the Supplemental Report of the Council covering the March 28, 1982, meeting*
 The committee heard statements from many members of the Society concerning the redistricting proposal that was approved by the Council on March 28, 1982. Some dissatisfaction with the redistricting plan was expressed by many of the members. A need for more representation for Pulaski County was expressed.
 After hearing from the membership, and after considerable discussion in the Reference Committee executive session, and after reviewing constitutional questions, the Reference Committee feels that an equitable solution to redistricting has been reached. Therefore, the Reference Committee unanimously recommends:
 That the action of the Council concerning redistricting (Item 4 of the Supplemental Report of the Council for the March 28, 1982, meeting) be replaced with renewal of consideration of the proposed amendment to the Constitution (Article VI, Section 2, Composition of the Council) on which the House voted at its meeting April 26, 1981, under old business. After this renewal, we recommend approval of the proposed amendment, as follows:
 Article VI. Section 2. Composition of the Council
 "The Council shall consist of the councilors, the president, first vice president, president-elect, secretary, treasurer, and immediate past president. The speaker and vice speaker of the House of Delegates and the past presidents shall be members ex-officio without vote, except that the immediate past president shall have a vote. There shall be two councilors from each district (delete: to serve staggered terms of two years each) *which has two hundred members or less. In districts where there are more than two hundred members, there shall be an additional councilor for each additional one hundred members. The Councilors shall serve staggered terms of two years each.* All councilors shall have equal voting privileges. A majority of the voting members shall constitute a quorum.

 Mr. Speaker, I move approval of this proposed amendment.

 (Speaker Chudy requested a standing vote on the proposed amendment. The House voted adoption of the amendment as presented.)

 Mr. Speaker, your reference committee recommends approval of the remainder of the Council report as presented.

2. Budget
 The Reference Committee heard considerable discussion concerning the increasing reserves of the Society. The committee was advised that Budgetary controls, including a cap on salaries, have been instituted. After hearing this discussion, the Reference Committee recommends that:
 (A) The Long Range Planning Committee meet and make recommendations promptly concerning future needs so that the Budget Committee will have information from the committee in considering the amount of reserves that are necessary for operating expenses in the 1983 budget.
 (B) Your Reference Committee also recommends that the Budget Committee consider changing the fiscal year of the Society so that the budget can be approved by the House of Delegates before its effective date.

 Mr. Speaker, I move approval of the report of the Budget Committee with the additions listed.

3. Report of the Executive Vice President
 Your Reference Committee recommends approval of the Report of the Executive Vice President with the recommendation that, in the future, the report include more detailed accounting of the activities and accomplishments of the office during the year.

 Mr. Speaker, I move approval of the Report of the Executive Vice President with the addition listed.

 Mr. Speaker, your Reference Committee rec-

ommends that the following reports be approved as written:

1. Committee on Cancer Control, including Supplemental Report
2. Committee on Continuing Education
3. Report of the Committee on Position Papers
4. Report of the Arkansas State Health Department
5. Report of the Sixth Councilor District

Mr. Speaker, I move approval of these reports as written.

Mr. Speaker, I would like to thank the other members of this reference committee for their performance of a very difficult task and I would particularly like to thank Rickey Medlock, medical student, for participating in this endeavor.

Mr. Speaker, this concludes the report of Reference Committee #2 and I move approval of the entire report. By standing vote, the House approved the report of Reference Committee Number Two.

Speaker Chudy then called on Kemal Kutait, chairman of Reference Committee Number One. Dr. Kutait reported as follows:

REPORT OF REFERENCE COMMITTEE NUMBER ONE

Mr. Speaker, your Reference Committee Number One composed of Lee Archer, medical student observer, Drs. Merrill J. Osborne, Allan Pirnique, Charles Logan, Edgar K. Clardy, A. C. Bradford and myself met and discussed the items assigned us and offer the following recommendations:

The *Committee on Medical Legislation* (James Weber, Chairman) was considered and accepted as written. The Committee expresses its sincere appreciation for a time-consuming job very well done by Dr. Jim Weber. We want the minutes to reflect the Society's appreciation of Dr. Weber's work on this committee. The Reference Committee recommends approval of the report.

The report of the *Sub-Committee on National Legislation* (W. P. Phillips, Chairman) was discussed and accepted as written. The feeling of the group present was that the liaison trips to Washington, D. C., were beneficial to the position of organized medicine and should be endorsed, continued at their present level or made even more frequently in time of need. The Reference Committee recommends approval.

The report of the *Committee on Medicine and Religion* (Fred Henker, Chairman) was discussed and accepted as written with the committee encouraging every member of the Society to become involved in the function of this committee, particularly by attending the Prayer Breakfast. The Reference Committee recommends approval.

The report of the *Constitutional Revisions Committee* (A. S. Koenig, Jr., Chairman) was discussed and the committee recommended acceptance of the report as written and thanks Dr. Koenig and his committee for a job well done. The Reference Committee recommends approval.

Report of the *Ad Hoc Committee on Medicine-Business Coalition* was presented by Dr. Purcell Smith, Jr., Chairman. This new committee is doing an excellent job in establishing liaison with industries, educating the physicians of industry's needs and industry of medicine's need and is to be commended for implementing this concept. The reference committee recommends this committee continue its good work. The Reference Committee recommends approval.

The report of the *Ninth Councilor District Professional Relations Committee* (Charles Ledbetter, Chairman) was accepted as written in the Journal. The Reference Committee recommends approval.

The report of the *Medical Education Foundation for Arkansas* (Robert Watson, President) was discussed in some detail with positive comments coming from the student representative, as well as the physicians present, as being an excellent program in establishing liaison between the students and organized medicine. The reference committee recommends the report be accepted as written.

The *Arkansas Medical Society Political Action Committee* report was discussed with its Chairman, Ken Lilly, present with explanation as to the mechanics of the decisions made by the committee. We wish to thank Dr. Lilly for a job well done by his committee. We urge each Society member to join AMSPAC. The Reference Committee recommends approval.

The report of the *Committee on Public Relations* (Milton Deneke, Chairman) was discussed and accepted as written. The importance of this newly activated committee was discussed in detail with much encouragement forthcoming for its continuation, expansion and funding by the Society as required for its responsibilities to be properly executed. The Reference Committee feels that Dr. Deneke and his committee have

done an outstanding job. The Reference Committee recommends approval of the report.

Mr. Speaker, this concludes our report and I move adoption of the entire report of this reference committee by the House of Delegates.

Mr. Speaker, we wish to thank those who appeared before this reference committee and the members of the committee and particularly the involvement of the medical student, Lee Archer, and our Medical Society staff members who so ably assisted us.

The House voted approval of the report in its entirety.

Vice Speaker Phillips called on George F. Wynne, chairman of Reference Committee Number Three, who gave the following report.

REPORT OF REFERENCE COMMITTEE NUMBER THREE

The members of Reference Committee Number Three were Lee Parker, Dwight W. Gray, Bascom P. Raney, Robert D. Miller, Charles Rodgers and myself as chairman. Richard Owings was the medical student observer.

Mr. Speaker and members of the House of Delegates, your Reference Committee gave careful consideration to the items referred to it and makes the following report.

1. The report of the Annual Session Committee was reviewed. It is the recommendation of this Reference Committee that the request of the chairman regarding the General Session program be approved. This request stated that the program committee be allowed to select all speakers and topics for the General Session program in order to adhere to a selected theme.
 Mr. Speaker, your Reference Committee recommends the adoption of this report.
2. Committee on Aging.
 This report was read. There was no discussion. Your committee recommends the adoption of the report.
3. Medical Services Review Committee.
 This report was read and discussed. Your committee wishes to re-emphasize to the members of the Society the importance of documentation of hospital and nursing home visits. This is particularly important when "*third party pay*" is involved. We recommend the adoption of this report.
4. Seventh Councilor District Professional Relations Committee. There was no action by this committee during the year. This report was received for reference.
5. Report of the Tenth District Councilor.
 There was no discussion of this report. It was read and we recommend its adoption.
6. State and Eighth Councilor District Professional Relations Committee. This report was read and we recommend its adoption.
7. Tenth Councilor District Professional Relations Committee.
 The problems of the councilor district were reported in their report printed in the March issue of the Journal of the Arkansas Medical Society. These problems were solved by this Professional Relations Committee in a satisfactory manner.
 The Reference Committee recommends the adoption of their report.
8. Fifth Councilor District Professional Relations Committee.
 The report was read and the Reference Committee recommends the adoption of the report.
9. Arkansas State Medical Board.
 This report was read and discussed. Dr. Joe Verser, Secretary of the State Medical Board, appeared and was questioned by the committee and members present at the Reference Committee meeting.
 We recommend the adoption of the report as printed in the Journal of the Arkansas Medical Society (March 1982).
10. The Arkansas Foundation for Medical Care.
 This report was read. The committee recommends that a representative of the Foundation be present in the future when this report is presented to a reference committee. Many members would have liked to question a representative.
 Since no Foundation member was present, the committee accepted the report as read and we recommend its adoption.
11. Committee on Insurance.
 The Reference Committee accepts the Insurance Committee report as written and recommends its adoption.

Mr. Speaker, I move the adoption of the entire report of this Reference Committee Number Three.

Mr. Speaker, this concludes the report of Reference Committee Number Three. I wish to thank those who appeared before this Reference



Morriss Henry, president for 1982-83, makes his inaugural address, May 2, 1982.



Purcell Smith, Jr., President of the Society for 1981-82 was master of ceremonies for the inauguration of the new president on May 2, 1982.

Committee, and my fellow members of this committee.

The report of Reference Committee Number Three was approved by the House in its entirety.

Vice Speaker Phillips called the attention of the House to the fact that the resolution from the Pulaski County Medical Society on emergency vehicles had been referred to Reference Committee Number Three. Due to clerical error, the Reference Committee had failed to include the resolution in its committee hearing and report. The chair declared an open hearing for discussion of the resolution. Morriss Henry pointed out that legislation enacted during the most recent special session could be interpreted to give the city of Little Rock sufficient authority to reinstitute an ordinance eliminating ambulances from the classification of emergency vehicles. Upon motion of Wilkins, the House voted approval of the resolution as presented. Secretary Elvin Shuffield requested that copies of the resolution be forwarded to all members of the Board of Directors of the Little Rock City Council, along with a record of Society action.

Speaker Chudy called for the report of the Nominating Committee. The report was presented by the chairman, Frank Morgan, who requested that each position be considered separately.

Dr. Morgan reported that the nominations for the position of president-elect were:

Asa Crow, Paragould

A. E. Andrews, Texarkana

Dr. Andrews requested that his name be withdrawn from the slate. Dr. Crow was elected by acclamation. Dr. Crow was escorted to the podium by James Maupin and John Bell. Dr. Crow expressed his appreciation to the House and stated that he would be honored to serve as president of the Arkansas Medical Society.

The other nominees for Society office were elected as proposed by the committee:

First Vice President: Paul Wallick, Monticello

Second Vice President: A. Samuel Koenig, Fort Smith

Third Vice President: Gerald L. Guyer, Stuttgart

Secretary: H. Elvin Shuffield, Little Rock
Treasurer: James M. Kolb, Jr., Russellville
Speaker of the House of Delegates:
Amail Chudy, North Little Rock
Vice Speaker of the House of Delegates:
W. P. (Pat) Phillips, Fort Smith
For councilor:
District 1: J. Larry Lawson, Paragould
District 2: John E. Bell, Searcy
District 3: L. J. Pat Bell, Helena
District 4: John P. Burge, Lake Village
District 5: Cal Sanders, Camden
District 6: James D. Armstrong, Ashdown
District 7: Ronald J. Bracken, Hot Springs
District 8: William N. Jones, Little Rock
Frank Morgan, N. Little Rock
Charles W. Logan, Little Rock
Harold D. Purdy, Little Rock
District 9: Rhys Williams, Harrison
District 10: Ken Lilly, Fort Smith

The House also approved the following nominations by the Nominating Committee:

For delegate to the American Medical Association (term January 1, 1983 to December 31, 1984): Joe Verser, Harrisburg

For alternate delegate to the American Medical Association (term January 1, 1983, to December 31, 1984): A. E. Andrews, Texarkana

For member-at-large position on the Arkansas State Medical Board: Stanley Applegate, Springdale

Vice Speaker Phillips recognized the chairman of the Council, John P. Burge, who presented the following report covering actions of the Council during the convention:

REPORT OF THE COUNCIL

The Council met on Thursday, April 29, and transacted business as follows:

1. Approved the report of the Executive Committee on implementation of the new councilor districts approved by the Council in March.
2. Recommended suspension of the Premarital Syphilis Serology Screening Program, with the understanding that the requirements could be reinstituted if needed at a later time.
3. Approved requests for dues-exempt membership as received from the component societies.
4. Approved the annual report of Audit of the Society records.
5. Approved the following appointments to the Medical Services Review Committee:

Neurosurgery: Robert Watson, Little Rock
Dermatology: Renie Bressinck, Little Rock
Family Practice: Ken Lilly, Fort Smith
Robert Etherington,
Eureka Springs
Internal Medicine: John Crenshaw,
Pine Bluff
Surgery: George Roberson, Pine Bluff
Anesthesiology: Jim Porter, Benton
Psychiatry: Warren M. Douglas, Little Rock
Urology: Hal R. Black, Jr., Little Rock

The Council met on Friday, April 30, and conducted the following business:

1. Heard a report from the chairman of the 1982 Annual Session committee and discussed ways of improving the scientific program and meeting participation. The Council voted to continue technical exhibits at the conventions and to authorize the Annual Session Committee to take appropriate action to increase visitation in the exhibits.
2. Voted to hold the 1983 meeting in Fayetteville.
3. Voted to utilize the new convention center and Excelsior Hotel in Little Rock for the 1984 meeting if arrangements can be made for those facilities.
4. Voted to withdraw participation in the Long Term Care Facility Advisory Board.
5. Appointed James Weber to the position of trustee of the Pension Plan.
6. Nominated Charles Wilkins to another term on the Board of Trustees of Arkansas Blue Cross-Blue Shield.
7. Reappointed T. E. Townsend, David Busby, and Richard Pearson to the position paper committee and asked the Committee to present recommendations for the two additional positions on the committee.

The Council met on May 1 and took the following action:

1. Appointed the following to the Board of Directors of the Arkansas Medical Society Political Action Committee:
W. Payton Kolb, Little Rock
F. E. Joyce, Texarkana
George W. Warren, Smackover
J. Larry Lawson, Paragould
Charles Rodgers, Little Rock
James M. Kolb, Jr., Russellville
A. Samuel Koenig, Fort Smith
Milton Deneke, West Memphis

John Hestir, DeWitt
Bobby McKee, Jonesboro
Mrs. Paul Cornell, Little Rock
Mrs. John Burge, Lake Village
Mrs. Charles Wilkins, Russellville
Mrs. Lynn Harris, Hope

2. Approved appointment of a committee of the three vice presidents to review the committee structure and make recommendations to the Council on revision, expansion, etc.
3. Heard a report from the Insurance Committee by chairman Charles Wilkins and approved the following recommendations of that committee:
 (A) to retain the present insuror for the disability group plan for Society members;
 (B) Approved continuation of spouses of deceased members on the Society's group hospitalization plan so long as the individual is a member of the Auxiliary or remains eligible for membership in the Auxiliary if the deceased member was covered by the plan at the time of death.
6. Heard a report from legal counsel on the termination of the defined benefit plan for Society employees.
7. Referred to the Medical School Committee a report from the Dean of the College of Medicine regarding medical student enrollment and funding of the college of medicine.
8. Requested that the chairman of the Annual Session committee make certain that our special guests and speakers for the annual session have individuals designated as their hosts.
9. Voted to ask that a physician or pharmacist be head of the Drug Diversionary Unit of the State Department of Health.
10. Authorized an expenditure of up to $1500 for the Long Range Planning Committee to engage professional assistance in long range planning.
11. Voted to use criteria for determining delegate representation of component societies in House of Delegates for district councilor representation when based on membership.

The Council met on May 2nd and transacted the following business:

1. Rejected a motion to discontinue use of the Arlington for the Society's annual meeting.
2. Voted to change the meeting dates for 1983 to one week earlier or one week later, if possible to make appropriate arrangements with the convention facility. The scheduled dates are April 21-24.
3. Voted to approve a proposal of the Public Relations Committee for seminars and authorized Society payments of expenses not covered by seminar registration fee. The Council voted to commend Dr. Milton Deneke and the Public Relations Committee for their excellent work.

Upon motion of Dr. Burge, the House of Delegates approved the report of the Council as presented.

Upon motion of Sanders, the House approved nominations for the Second Congressional District position on the Arkansas State Board of Health as announced by Vice Speaker Phillips:

Kenneth R. Meacham, Searcy
Paul J. Baxley, Batesville
R. D. Rasberry, Searcy

The House approved, upon motion of Maupin, the following nominations for the Fourth Congressional District position on the State Board of Health:

Wayne G. Elliott, El Dorado
James G. Armstrong, Ashdown
J. R. Kendall, Camden

The Vice Speaker thanked the members of the House for their efforts in a very productive meeting and declared the meeting adjourned. Adjournment was at 10:55 a.m.

CONSTITUTIONAL AMENDMENTS PRESENTED FOR FIRST READING AT 1982 ANNUAL SESSION

ARTICLE IV. Constitution.

Section 3. Delegates

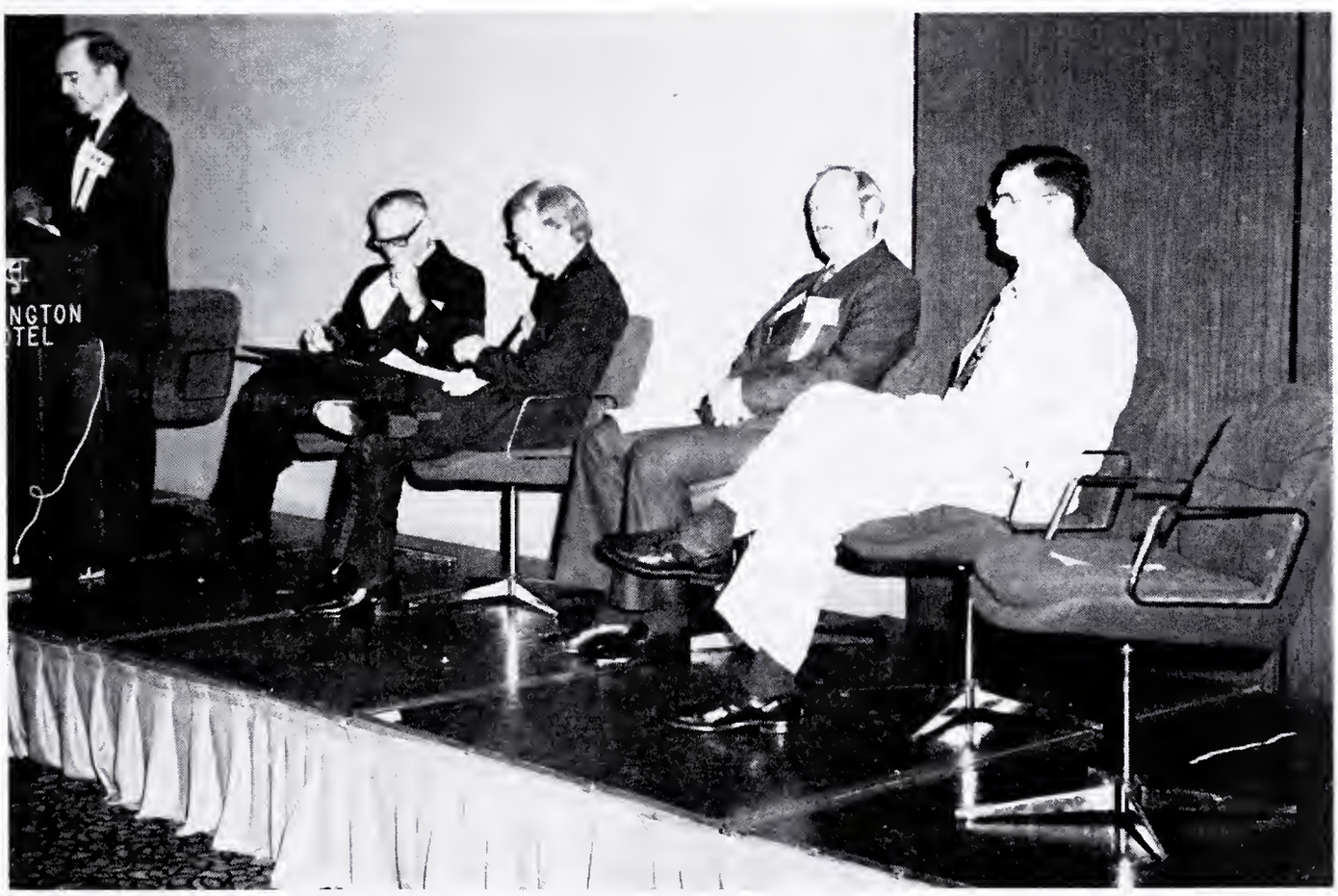
Delegates shall be those members who are elected *or seated* in accordance with the Constitution and Bylaws to represent their respective component societies in the House of Delegates of this Society.

ARTICLE V. Constitution. House of Delegates.

The House of Delegates shall be the legislative body of the Society, and shall consist of (1) delegates elected by the component societies *or seated by the House of Delegates to represent component societies* as provided in these bylaws; (2) the councilors, and (3) ex-officio, the president, first vice president, president-elect, speaker, vice speaker, secretary, treasurer, and past president of the Society, provided, however, that the ex-officio

PRESIDENTIAL INAUGURAL





Seated on the stage for the inaugural ceremony on Saturday night of the convention were Vice Speaker W. P. Phillips, Speaker Amail Chudy, First Vice President Frank Morgan, Secretary Elvin Shuffield, 1981-82 President Purcell Smith, Jr., Chairman of the Council John P. Burge, Third Vice President Paul Wallick and Treasurer James M. Kolb, Jr. Morriss Henry, president for 1982-83 is at the podium.

members shall have the power of voting on all subjects except the election of officers.

BYLAWS. CHAPTER I. Membership

(A) Active Membership

The active membership of this Society shall be comprised of all the active members of its component societies. Only such person is eligible for active membership in a component society as possesses the degree Doctor of Medicine *or Doctor of Osteopathy* and holds an unrevoked license to practice medicine and surgery issued by the (delete: Board of Medical Examiners which consists of members recommended by this Society) *Arkansas State Medical Board*. The eligibility requirements set forth in the preceding sentences are not to apply, however, (delete: to members in good standing in any component society at the time of the adoption of this section. Adopted, House of Delegates, 1961 Annual Session, nor) to the members of the specially chartered "Student and Intern and Resident Societies."

CHANGES IN CONSTITUTION AND BYLAWS APPROVED AT 1982 MEETING

The Constitution and Bylaws were revised by action of the House at the 1982 meeting. The following is the revised wording of the sections changed.

Constitution. Article VI. Council

Section 2. Composition of the Council

The Council shall consist of the councilors, the president, first vice president, president-elect, secretary, treasurer, and immediate past president. The speaker and vice speaker of the House of Delegates and the past presidents shall be members ex-officio without vote, except that the immediate past president shall have a vote. There shall be two councilors from each district which has two hundred members or less. In districts where there are more than two hundred members, there shall be an additional councilor for each additional one hundred members. The councilors shall serve staggered terms of two years each. All councilors shall have equal voting privileges. A majority of the voting members shall constitute a quorum.

Section 3. Executive Committee

The chairman of the Council, the president, the president-elect, the secretary, and the immediate past president shall constitute the Executive Committee of the Council. The chairman of the Council shall serve as chairman of the Executive Committee. The Executive Committee shall have such powers and duties as provided in the Bylaws and as may be defined from time to time by resolution of the Council.

Bylaws. Chapter V. Election of Officers

Section 1. Nominating Committee

(A) Prior to adjournment of the first meeting of the House of Delegates at each Annual Session, the delegates from the component societies of each councilor district shall meet, the councilor not subject to re-election acting as chairman, and select one delegate from each district to form a committee on nominations. This committee shall consist of ten delegates, one from each councilor district. It shall meet and organize by selecting a chairman and a secretary. It shall be the duty of this committee to consult with members of the Society and to hold one or more meetings at which time the best interest of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the headquarters office no later than February 1 in the shape of a ticket containing the names of two or more members for the office of president-elect and of one member for each of the other offices to be filled at the Annual Session. No two candidates for president-elect shall be named from the same county.

SCIENTIFIC SESSIONS

The 1982 theme for the general session program at the annual session was "Preventive Medicine for the 80's." Paul A. Wallick of Monticello was program chairman.

Dr. Wallick, as third vice president, presided at the opening general session. Charles W. Gross of Memphis was the first speaker; his topic was "Myringotomy and Ventilation Tubes for Recurrent Otitis Media." "Sepsis" was the topic of the presentation by Joseph Brewer, Chief of Infectious Diseases at St. Luke's Hospital in Kansas City, Missouri. After intermission and exhibit visitation, Jerome Cohen, Associate Professor, Department of Internal Medicine, St. Louis Uni-

versity School of Medicine, spoke on "Risk Factor Modification and the Prevention of Coronary Heart Disease." The morning was concluded with a presentation by Peyton Eggleston, Associate Professor of Pediatrics, Division of Immunology, Johns Hopkins in Baltimore, on "Exercise-Induced Asthma — Lessons in the Chronic Management of Asthma."

Frank E. Morgan of North Little Rock, first vice president, presided at the second general session on Friday afternoon. The session was opened by J. L. Breslow of Boston who spoke on "Lipoproteins and Athrosclerosis." Kimber M. Stout of Little Rock presented "Coronary Artery Spasms and Calcium Channel Blockers." "The Beta-Blockers Heart Attack Trial and Its Clinical Implications" was presented by Neil D. B. de Soyza of Little Rock. Robert R. Hughes of the Mackey Foundation in Memphis spoke on "Preventive Medicine and Gynecologic Oncology." "Scoliosis Screening in Arkansas" was presented by Richard McCarthy, Section of Children's Orthopaedics, Arkansas Children's Hospital in Little Rock. Jane Shaw, Vice President of Product Research and Development, and Director of the Transdermal Program, ALZA Corporation, Palo Alto, California, concluded the afternoon session with "Topical Administration of Drugs for Systemic Therapy."

Harold D. Purdy of Little Rock, as second vice president, presided at the final session on Saturday morning. "Update on Renal Vascular Hypertension," the opening presentation, was given by E. Darracott Vaughan, Chairman, Department of Urology, Cornell University Medical College in New York City. Sam Nixon, Director of Division of Continuing Education at the University of Texas Health Science Center at Houston and Immediate Past President of the American Academy of Family Physicians spoke on "Sexually Transmitted Diseases in the 80's." "New Pharmacologic Treatments for Depression" was the subject presented by Lionell Corbett, Assistant Professor with the Department of Psychiatry at Rush Medical School in Chicago, Illinois. Barney M. Dlin, Clinical Professor of Psychiatry at Temple University Health Sciences Center in Philadelphia, Pennsylvania, spoke on "The Anniversary Reaction: A Preventable Illness, Its Detection and Treatment." Mr. Ed Kelsay, Legal Counsel for The Oklahoma State Medical Association in Oklahoma City, concluded the general session with "Avoiding Office Legal Problems."

RELATED MEETINGS

The Alan Cazort Allergy Society of Arkansas met on Thursday evening, April 29. Speaker for the evening was Peyton Eggleston of Johns Hopkins.

The Arkansas Chapter of the American College of Surgeons held a luncheon meeting on Friday, April 30. Theodore Burns, Ochsner Clinic in New Orleans, was guest speaker. Carl Williams of Fort Smith presided as president.

The Arkansas Chapter of the American Academy of Pediatrics met at the home of John Trieschmann, chapter president, for a buffet dinner.

The Otolaryngology — Head and Neck Surgery Section met on Saturday, May 1, beginning at 9:00 a.m. Guest speaker was Charles Gross of Memphis. A. Reed Thompson of Little Rock is president. Carlton Chambers of Harrison was elected president-elect and Dwayne Ruggles of North Little Rock is secretary-treasurer.

The Arkansas Academy of Opthalmology met at 9:00 a.m. on Saturday, May 1. Alex Irvine, Professor of Ophthalmology and Co-Chairman of the Department of Ophthalmology at the University of California School of Medicine in San Francisco, was the guest speaker. A Henry Thomas of Little Rock is president. John Williamson of El Dorado was elected secretary-treasurer.

The Arkansas Orthopaedic Society held a luncheon meeting on Saturday, May 1. Tim Keenan, an Australian on fellowship with the Department of Orthopaedics at the University of Arkansas College of Medicine, was guest speaker. James F. Moore of Fayetteville was elected president and James H. Buie of Fort Smith was elected secretary-treasurer.

The Arkansas Urologic Society met at 11:30 a.m. on Saturday, May 1, for a luncheon meeting. E. Darracott Vaughan of Cornell University was guest speaker. Malcolm Moore of Little Rock was elected president and Steve Wilson of Fort Smith was elected secretary-treasurer. Dr. Wilson was also elected Arkansas Representative to the Executive Committee of the South Central Section of the American Urologic Society.

The Arkansas Academy of Family Physicians met on Saturday, May 1, for a luncheon meeting. Guest speaker was Sam Nixon, immediate past president of the American Academy of Family Physicians. Jerry Mann of Arkadelphia is president and Lee Parker of Fayetteville is president-elect.

The Arkansas Psychiatric Society held a scientific meeting on Saturday, May 1. Speaker for the meeting was Lionell Corbett of Rush Medical College in Chicago.

The Arkansas Society of Internal Medicine held a panel program and luncheon meeting on Saturday, May 1. Panel participants were: Charles F. Wilkins of Russellville, John Crenshaw of Pine Bluff, Mr. Ed Kelsay who is legal counsel for The Oklahoma State Medical Association in Oklahoma City and Mr. Mike Mitchell, legal counsel for the Arkansas Medical Society. Monroe Painter of Fayetteville is president. Jerry Stewart of Fort Smith was elected president-elect and Jack Blackshear of Little Rock was elected secretary-treasurer. James Rasch of Little Rock, Charles Wilkins of Russellville and John Crenshaw of Pine Bluff were elected to also serve on the executive committee.

The Plastic Surgeons of Arkansas met on Saturday, May 1, for a noon luncheon meeting. Cole Goodman of Fort Smith was in charge of the meeting.

The Arkansas Society of Pathologists met for a luncheon and business meeting on Saturday, May 1. New officers elected are: Aubrey Hough as chairman of the board, Albert E. Kalderon as president, Gary Markland as first vice president, Rodney Roe as second vice president, Don Scott as third vice president, Charles Sullivan as secretary-treasurer — all of Little Rock — and James F. Clark, Jr., of Pine Bluff as member-at-large.

SCIENTIFIC EXHIBITS

Physicians and allied health organizations participated in the exhibits for the 1982 meeting. The Society expresses its thanks to individuals who displayed exhibits and added to the educational benefit of the meeting. A listing of exhibitors follows:

Area Health Education Center, University of Arkansas College of Medicine. "AHEC's Goals, Resources, and Programs"

Kenneth G. Jones, "Fracture of Scaphoid (Carpal-Navicular) Diagnosis and Treatment"

Charles C. Schock, "Problems in Spinal Surgery"

Joe B. Colclasure and James D. Billie, "Outpatient Facial Plastic Surgery in Otolaryngology"

John R. E. Dickins, "Hearing Loss as a Life-Threatening Sign"

Radiology Associates, "CT Spine Experience"

H. A. Ted Bailey, James Pappas, Robert N. McGrew, Joe B. Colclasure, John R. E. Dickins, and James D. Billie, "Expanding the Use of Outpatient Facilities for Otolaryngology Surgery: A Five-Year Review of 10,000 Cases"

C. M. Boyd, J. E. Seabold, H. Wan Youn, and Gopal Saha, Ph.D., "Clinical Application of Indium-III Labeled Leukocytes"

R. Seibert and Hassan Bashiri, D.M.D., "Maxillofacial Prosthodontics"

Margaret Kenna and Bruce Leipzig, "Nasal Papillomas and Squamous Carcinoma — An Unusual Case"

Mr. Jack Diner and Ms. Mary Fran Scrimager, "Impression Method of Fitting Artificial Eyes"

Arkansas Academy of Pediatrics, "First Ride, Safe Ride"

Michael W. Stannard, Jorge Jiminez and Eugene F. Binet, "Cranial Sonography: Anatomic and Pathologic Correlation"

C. N. Sun, Aubrey Hough, P. N. Morgan and M.



Morriss Henry takes the oath of office of president of the Arkansas Medical Society for 1982-83.



The gavel, token of the office of president of the Arkansas Medical Society, passes from Purcell Smith, Jr., to Morriss M. Henry.

Husain, "Unusual Membrane Bound Intra-Nucleur Inclusions in Human Fibroblasts Infected with Herpes Simplex"

C. N. Sun and J. H. L. Watson, "A Combination of TEM and SEM of Human Jejunum in Whipple's Disease"

D. Bud Dickson, "Arthroscopy for the Athletic and Arthritic Knee"

D. Bud Dickson, "Total Joint Replacement for the Arthritic Hip and Knee"

R. Sloan Wilson and James H. Landers, "The Painful Eye"

Albert E. Kalderon, "Peroxidase-Antiperoxidase PAP Technique"

George Schroeder, "Aragon Laser Treatment of Glaucoma"

A. G. Pellizzetti, "Arkansas' First Mobile Diagnostic Service"

Wilma Diner, "Enteroclysis — A Better Look at a Difficult Area"

C. N. Sun, "Oncocytoma and Warthins Tumor of the Parotid"

Arkansas Spinal Cord Commission, "Circle to Independence"

E. S. Golladay and Mr. D. Nash, "Current Con-



Dr. Henry presents plaque of appreciation to Purcell Smith, Jr., for his service as President of the Society.

cepts in the Creation and Care of Ostomies in Children"

E. S. Golladay and Romona Bates, "A New Approach to the Management of Isolated Esophageal Atresia"

E. S. Golladay, W. P. Fiser and Mr. D. G. Nash, "Postoperative Gastric Drainage in Hypertrophic Pyloric Stenosis"

Robert Casali, Gilbert Campbell and Mr. Sam Oliver, "Noninvasive Testing for Carotid Disease by Ocular Pneumo-Plethysmography (OPG-GEE)"

Ellery C. Gay, Jr., "Cosmetic Surgery in Outpatient Surgery Center"

OTHER ACTIVITIES

MEMORIAL SERVICE

A joint Society-Auxiliary Memorial Service was held at 9:30 a.m. on Sunday, May 2, with Society president Morriss M. Henry presiding.

"The Lord's Prayer" was sung by Mr. Mike Edwards, Director of Music at the First Baptist Church in Hot Springs.

The names of deceased members of the Society were read by Dr. Henry. The names of deceased members of the Auxiliary were read by Mrs. Herbert Taylor, president.

The Memorial Address was by Dr. Doug Dickens, Pastor of the First Baptist Church in Hot Springs.

The benediction, "Eternal Life" was sung by Mr. Edwards.

IN MEMORIAM

Dr. W. O. Arnold, Hot Springs
Dr. James I. Balch, DeQueen
Dr. Charles M. Brizzolara, Little Rock
Dr. Philip T. Cullen, Little Rock
Dr. T. J. Cunningham, Jr., Pine Bluff
Dr. Julian R. Fairley, Osceola
Dr. Eli Gary, Arkadelphia
Dr. W. Paul Gray, Batesville
Dr. Robert A. Hayes, Wynne
Dr. Gaston A. Hebert, Hot Springs
Dr. James B. Holder, Jr., Monticello
Dr. Curtis W. Jones, Sr., Benton
Dr. T. H. Jones, Waldo
Dr. Fred H. Krock, Fort Smith
Dr. J. Neal Laney, Forrest City
Dr. William L. McNamara, Russellville
Dr. Ralph M. Patterson, Hot Springs
Dr. B. J. Reaves, Little Rock
Dr. Vernon E. Sammons, Jr., Hot Springs
Dr. Ruth Steinkamp, Little Rock
Dr. D. B. Stough, Hot Springs
Dr. T. S. Van Duyn, Stuttgart
Dr. Finis Q. Wyatt, Batesville
Mrs. R. Kent Alexander, Fort Smith
Mrs. Shelby Atkinson, North Little Rock
Mrs. Charles T. Chamberlain, Fort Smith
Mrs. M. S. Craig, Sr., Batesville
Mrs. Robert M. Eubanks, Little Rock
Mrs. Charles G. Hinkle, Batesville
Mrs. Bert Phillips, North Little Rock
Mrs. George Pollock, Osceola
Mrs. Wallace D. Rose, Little Rock
Mrs. E. O. White, Hamburg

PRAYER BREAKFAST

A Prayer Breakfast for members of the Society and Auxiliary was sponsored by the Committee on Medicine and Religion, headed by Dr. Fred Henker. The breakfast was held on Saturday morning, May 1, beginning at 7:15 a.m.

Invocation was by Fred Henker. Jack Blackshear of Little Rock sang "Be Thou With Me". He was accompanied by Eugene Taylor of Little Rock.

C. R. Ellis, Malvern, read from the Scripture.

The devotional, "The Poor We Have With Us Always", was by Walter O'Neal of Little Rock.

The breakfast closed with benediction by Dr. Ellis.

FIFTY YEAR CLUB

The Fifty Year Club of the Arkansas Medical Society held a luncheon meeting on Friday, April 30, 1982. Charles R. Henry, president of the club, presided at the luncheon meeting.

New members of the club were announced:

A. J. Baker, Paragould
Van C. Binns, Monticello
W. A. Ellis, Helena
Paul Hughes, Texarkana
Virgil Kennedy, Fort Smith

James D. Kinley, Beebe
Vincent O. Lesh, Fayetteville
Max McAllister, Fayetteville
Clark B. Procter, Little Rock
Joe F. Rushton, Magnolia
R. C. Shanlever, Jonesboro
John McCollough Smith, Little Rock

Membership certificates and pins were presented to the new members.

Those present for the luncheon were the president, Dr. Henry; the secretary, Edgar Easley of Little Rock, Frances Rothert of Hot Springs, and new members Drs. Binns, Ellis, Hughes, Lesh, McAlister, Rushton, Smith, and Kinley.

John McCollough Smith of Little Rock was elected as the new president and Max McAlister of Fayetteville was elected secretary.

Guest speaker for the luncheon meeting of the club was Fred O. Henker of Little Rock who spoke on "Reflections of P. O. Hooper's Presidential Address to the Arkansas Medical Association in 1871".

The Fifty Year Club made a contribution to the History of Medicine Section of the Library of the University of Arkansas for Health Sciences.

PAST PRESIDENTS' BREAKFAST

The Society was host for a breakfast honoring all past presidents. The breakfast was held on Sunday morning in the Arlington. Present were A. S. Koenig, Jr., Kemal Kutait, C. R. Ellis, A. E. Andrews, George F. Wynne, Robert Watson, Ben Saltzman, Purcell Smith, Payton Kolb, and Ross Fowler.

BLUE CROSS-BLUE SHIELD PARTY

Blue Cross-Blue Shield of Arkansas hosted a cocktail reception on Thursday evening for all members of the Society and their guests. George Mitchell, president, and members of his staff were present, extending hospitality to all. The Society expresses its appreciation to Blue Cross-Blue Shield for another great party.

WESTERN PARTY

On Friday evening of the convention, everyone was dressed in western or casual attire for the western party with barbecue and beer. The room was decorated in a western theme and a western band played for dancing. Members enjoyed an evening of relaxation, visiting, and dancing.

INAUGURAL CEREMONY

President Purcell Smith, Jr., served as master of ceremonies for the Inaugural Ceremony on Saturday evening of the convention.

Invocation was by the Speaker of the House of Delegates Amail Chudy of North Little Rock.

President Smith welcomed members and guests to the inauguration of the 107th president of the Arkansas Medical Society.

Officers seated on the stage were introduced by Dr. Smith. They were: John P. Burge, Chairman of the Council; Elvin Shuffield, Secretary; Frank E. Morgan, First Vice President; Paul A. Wallick, Third Vice President; James M. Kolb, Jr., Treasurer; Amail Chudy, Speaker of the House of Delegates, and W. P. Phillips, Vice Speaker of the House of Delegates.

President Smith recognized councilors who had served during the past year and expressed appreciation to them.

Past presidents in attendance were introduced by Dr. Smith. Present were: Kemal Kutait, A. E. Andrews, George F. Wynne, W. Payton Kolb, A. S. Koenig, Ben N. Saltzman, Joe Verser, Robert Watson, C. R. Ellis, H. King Wade, Jr.,

Special guests were introduced as follows: Mrs. Raymond Peeples, President of the Auxiliary for 1981-82; Mrs. Herbert Taylor, President of the Auxiliary for 1982-83; Mrs. Paul Cornell, President-elect of the Auxiliary for 1982-83; Mrs. Deany Reid, President of the State Medical Assistants Society; Fred Smith, President of the Arkansas Hospital Association; Dr. Roger Busfield, Executive Director of the Arkansas Hospital Association; Shirley Schmidt, President of the Arkansas Association of Nurse Anesthetists, and Johnnie Rossell, Government Relations Chairman of the Arkansas Association of Nurse Anesthetists.

President Smith thanked the officers and committee members who had served with him during his term as president. He expressed special thanks to Paul Wallick, convention chairman, and commended him for a job well done.

Dr. Smith administered the oath of office of president of the Arkansas Medical Society to Morriss M. Henry of Fayetteville, and presented the gavel to Dr. Henry.

On behalf of the Society, Dr. Henry presented a plaque of appreciation to Dr. Smith for his service to the Society as president for 1981-82.

Dr. Henry introduced family members and guests present. They included his wife Ann and

their children—Paul, Kathy and Mark; his brother Dr. Herbert Henry and his wife, Dr. Louise Henry; his parents-in-law Opal and Andy Rainwater; brothers and sisters-in-law Bill and Sheryl Rainwater and daughter Ashley and Jerre and Jerry Jouett and sons Jeff and Jason; his former legislative aide, Diane Larrison, and her husband Jim; and a friend of his children, Pat Meek. His parents, Drs. Louise and Murphey Henry, were unable to be present.

Dr. Henry addressed the group as follows.

INAUGURAL ADDRESS

Morriss M. Henry

I would first like to say how much I have enjoyed working with Dr. Purcell Smith, who has worked hard and managed to stay pleasant while helping to solve difficult problems and has been a truly stabilizing influence on the Society.

Dr. Cliff Long and Miss Leah Richmond, and Ken LaMastus and the Arkansas Medical Society staff have been a great deal of help in anticipating our needs and have made our serving as president and president-elect a much easier responsibility.

I want to thank the Arkansas Medical Society for this honor and opportunity to serve as your president for this coming year. It is with deep appreciation to the members that I take this responsible position and pledge to you to do my best to represent you well in the coming year.

I see two questions standing out from all the others as our main concerns for this year.

These are the questions of some physicians I recently asked to join the Arkansas Medical Society. "Why join if all they do is bicker and argue" and "what advantages does the Society offer me for my money and time?"

My answer is that the Society offers many services and advantages, probably most of the membership never think about or are unaware of the amount of time some members give to helping work on our medical problems.

A few examples are the physicians who serve

1. on the Medical Services Review Committee, a committee to advise Blue Cross & Blue Shield and Medicare about what constitutes reasonable medical care and reasonable fees. This is a very important service to the physisians of the State.
2. Professional Relations Committee to investigate and help resolve disputes between patients and physicians.
3. A number of other committees meet with state agency heads and try to seek solutions to problems encountered between state agencies and the medical profession or work on issues of concern to the medical profession,
4. The Arkansas Medical Society maintains a State Legislative representative to meet with State Legislative Committees to answer their questions and state the Arkansas Medical Society's position on various issues and to report back to our membership pending legislation that may affect them.
5. The Arkansas Medical Society also has a voice or makes recommendations for appointments to important boards and commissions, such as the Medical Board, the State Health Board, Blue Cross-Blue Shield, Peer Review, and a number of others. All of whom have an impact on medical care and the practice of medicine.

Tonight I want to discuss with you two of our problems. Where is the Medical Society going and what are we offering the membership,

I am sure a number of you share with me a concern about where the Arkansas Medical Society is going in the next few years or if we will even have a State Medical Society.

In all organizations that are active there will be some debate and disagreements. This is healthy in solving problems and working out solutions to issues. *If* the members remember that the effect of our words and actions can tear down as well as build up an organization.

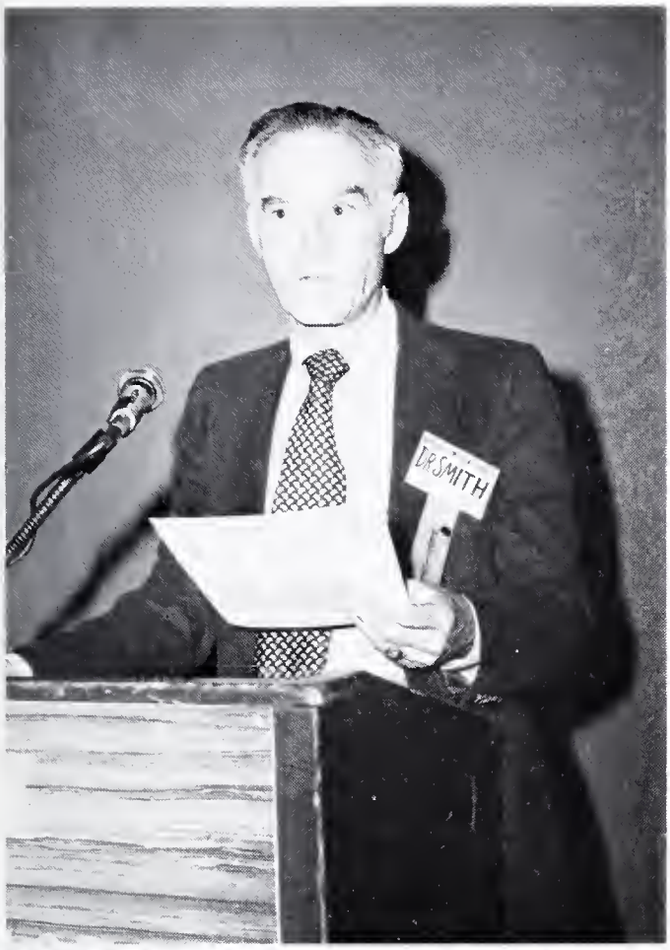
Over the past 4 to 5 years our internal problems have taken more and more of our meeting time, with less and less time spent on our reasons for our existence as an organization. If we continue on this course, we may indeed self destruct as a State Medical Society.

These internal problems are turning off our membership at a time when we should all be working to promote our Society. We should settle our internal differences because it is time to move on to other important issues.

The practice of medicine is undergoing big changes. Not only are there new and different methods of treating illness and diseases rapidly being developed, but there are over 200 separate and different groups besides physicians providing some form of medical care to the public.

I can assures you that there will be major changes in how you practice medicine in the next

OTHER CANDID CONVENTION PHOTOGRAPHS











5 to 10 years. The direction these changes take can best be guided by our united efforts working in and through our State Medical Society.

The important questions for those of you who have already made the decision to participate — Where should the Society go in the '80's? What should our agenda include?

One of our main functions as a Society is *education.*

We have a responsibility to our patients and to ourselves to stay educated in our fields.

Dr. Hyman, who was Dean of the University of Tennessee Medical School at Memphis, told my class upon our graduation that 90% of our class would in 10 years be practicing medicine that was 10 years behind medical knowledge and practice.

I don't share his pessimism about our willingness to keep up, but I know it is a continued challenge to keep abreast of new and better medical and surgical knowledge. And I know how hard it is for a tired doctor to be motivated to read medical articles at the end of a long day of practice.

Society meetings are an opportunity to hear leaders in their fields of medicine discuss new medical concepts. In addition, many opportunities are available at the meetings to discuss our problem cases with one another, and to share our medical experiences.

The Society's Committee on Public Relations, under the leadership of Dr. Milton Deneke, has taken a lead recently to educate our medical staffs. I am proud that we have recognized the need for this kind of continuing education, and that we are providing it around the State, where our staffs live. We plan to continue to hold workshops and seminars for our medical assistants and office staffs, but it is up to you to provide the time for them to attend the sessions the Society offers. That will require your support and cooperation, for you as employers must take the lead in motivating your assistants to continue to improve their ability to work with your patients.

The third type of education is *public education.* The Society has begun asking our guest speakers to take their messages to the Arkansas public by meeting with the press when they come to Arkansas. With space set aside at Society meetings where television lights can be set up, these guest speakers provide information on many areas of medicine to our viewers and readers. As the public understands medicine better, your work is made easier.

Sometimes this process of education can happen in an unexpected way. I once had a patient who wasn't sure I was giving her the best advice about her particular problem until she saw the same problem discussed in the Rex Morgan, M.D., comic strip. As soon as Rex told his comic strip patient what to do, my patient became a much easier patient to work with.

We also have a responsibility to educate our public so that they will recognize medical fraud when they see or experience it. The M.D. degree can be a license to steal if it is used irresponsibly; and there are many quasi-medical groups that continue to seek to practice some form of medicine by passing state laws to license themselves. Sitting in the State Senate as I do, I know it is harder than ever to protect the public from those who want to practice medicine without proper training.

This brings me to my *second topic, where the Society should go in the 80's,* and it brings me to my perennial topic also: making local politics a regular part of your and your spouse's concern.

Politicians realize that political networks have big clout, or so a newspaper article recently stated. I think that statement meant that a politician's strength nowadays is often measured by his or her ability to gain the support of political networks. Political networks would include bankers and other financial interests; farmers, lawyers, and possibly doctors.

Years ago, people like bankers were reluctant to get involved directly in politics for fear they would alienate their customers. But today, they consider political activity an absolute necessity.

Several years ago, *Medical Economics* magazine published a break-down on what physicians and their families spend on various things. As I recall, political contributions were at the bottom of the list.

Physicians and their families, like bankers and big agriculture leaders, are high on the list of groups with *potential* political influence.

The Medical Auxiliary is a very valuable support group of our Society and we should encourage them to use their potential in advancing our Society goals. As Mrs. Taylor, President of the Auxiliary, said, they have good ideas but it is up to us to help them. They are perhaps the single most unused asset of the medical profession.

A small number of physicians do speak up on issues that interest them. A recent example is the doctors' concerns about the nuclear weapons

build-up. I believe the nuclear war and nuclear power issues will be to the 80's what the civil rights movement was to the 60's, and the anti-Viet Nam war movement was to the 70's.

Single issues like these come and go, but political problems in need of solutions stay with us, and some of them have very little romance about them; they just require a lot of hard work.

Many people who get involved in politics do so because of an interest in a single issue. I am not criticizing this tendency, but I am saying that we have a need to take a second step, and to develop our leadership opportunities on a local level. As Tip O'Neill has said, "The key to understanding all politics, whether on a State level or a national level, is to know that *all politics are local.*"

The State Society has only as much political effectiveness as its members and the Auxiliary develop on a local level.

The question again is why join and work in our State Medical Society?

As I pledged in my oath of office that I shall strive constantly . . . to maintain the ethics of the medical profession . . . and to promote the public health and welfare.

I shall dedicate myself to improving the health standards of the American people . . . and to the task of bringing increasingly improved medical care . . . within the reach of every citizen.

I shall champion the cause of freedom in medical practice . . . and freedom for all my fellow Americans.

I am sure each and every one of you have pledged to yourself the same goals. This is the reason for having our State Medical Society.

I hope we will make EDUCATION, AND POLITICAL ACTION our agenda for the 80's: Education for ourselves, our medical assistants, and our public; political action to make our communities and the State of Arkansas better places to live.

COUNCIL RECEPTION

Dr. and Mrs. Morriss Henry, Dr. and Mrs. Purcell Smith, Jr., Dr. and Mrs. John P. Burge, and Dr. and Mrs. Elvin Shuffield received guests at the Council-hosted reception in the Venetian Dining Room of the Arlington Hotel following the inaugural ceremony. The room was beautifully decorated and members enjoyed hors d'oevres and fellowship.

REORGANIZATIONAL MEETING OF THE COUNCIL

The Council met for a reorganizational meeting following adjournment of the House of Delegates on Sunday. John P. Burge of Lake Village was re-elected chairman of the Council and Alfred Kahn, Jr., of Little Rock, was named editor of the Journal for another year.

REGISTRATION FIGURES
106th Annual Session

Physicians	358
Medical Students, Medical Assistants, Nurses	4
Scientific Exhibitors	10
Commercial Exhibitors	118
Others	34
Total	524
Auxiliary Registration	125

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY 1982-1983

President	Morriss M. Henry, P. O. Box 1727, Fayetteville 72702
President-elect	Asa A. Crow, #1 Medical Drive, Paragould 72450
First Vice President	Paul A. Wallick, 906 Roberts Drive, Monticello 71655
Second Vice President	A. Samuel Koenig, III, 922 Lexington, Fort Smith 72901
Third Vice President	Gerald L. Guyer, Rt. 1, Box 21-D, Stuttgart 72160
Secretary	Elvin Shuffield, 2 Valley Club Circle, Little Rock 72212
Treasurer	James M. Kolb, Jr., 305 Skyline Dr., Russellville 72801
Speaker, House of Delegates	Amail Chudy, 1801 Maple, North Little Rock 72114
Vice Speaker of House	W. P. Phillips, P. O. Box 3507, Fort Smith 72913
Journal Editor	Alfred Kahn, Jr., 1300 West Sixth, Little Rock 72201
Delegates to AMA	Joe Verser, P. O. Box 106, Harrisburg 72432
	T. E. Townsend, 1420 West 43rd, Pine Bluff 71603
Alternates	A. E. Andrews, P. O. Box 689, Texarkana 75501
	W. Payton Kolb, 230 Medical Towers Bldg., Little Rock 72205
Executive Vice President	C. C. Long, P. O. Box 1208, Fort Smith 72902

EXECUTIVE COMMITTEE OF THE COUNCIL

Chairman of the Council	John P. Burge, Lake Village Clinic, Lake Village 71653
President	Morriss M. Henry, P. O. Box 1727, Fayetteville 72702
President-elect	Asa A. Crow, #1 Medical Drive, Paragould 72450
Secretary	Elvin Shuffield, 2 Valley Club Circle, Little Rock 72212
Immediate Past President	Purcell Smith, Jr., P. O. Box 5675, Little Rock 72215

COUNCILORS

District	Councilor Term Expires 1983	Councilor Term Expires 1984	Counties in District
1.	*Merrill J. Osborne 1533 North 10th Blytheville 72315	J. Larry Lawson #1 Medical Drive Paragould 72450	Clay, Craighead, Crittenden, Fulton, Greene, Lawrence, Mississippi, Poinsett, Randolph, and Sharp
2.	Jim E. Lytle P. O. Box 2116 Batesville 72501	*John E. Bell 1300 South Main Searcy 72143	Cleburne, Conway, Faulkner, Independence, Izard, Jackson, Stone, and White
3.	John Hestir P. O. Drawer 512 DeWitt 72042	*L. J. P. Bell 626 Poplar Helena 72342	Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis, and Woodruff
4.	Lloyd G. Langston 1408 West 43rd Pine Bluff 71603	*John P. Burge Lake Village Clinic Lake Village 71653	Ashley, Chicot, Desha, Drew, Jefferson, and Lincoln
5.	*George Warren P. O. Box "W" Smackover 71762	Cal R. Sanders P. O. Box 757 Camden 71701	Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita, and Union
6.	*F. E. Joyce P. O. Box 2763 Texarkana 75501	James D. Armstrong P. O. Box 637 Ashdown 71822	Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk, and Sevier
7.	*R. Jerry Mann 416 Main Arkadelphia 71923	Ronald J. Bracken 505 West Grand Hot Springs 71901	Clark, Garland, Grant, Hot Spring, Montgomery, and Saline
8.	*W. Ray Jouett 750 Med. Towers Bldg. Little Rock 72205 Frank E. Morgan 410 Pershing Blvd. No. Little Rock 72114 Charles W. Logan 500 South University Little Rock 72205	William N. Jones 500 South University Little Rock 72205 Harold D. Purdy 6924 Geyer Springs Rd. Little Rock 72209	Pulaski
9.	Richard N. Pearson 1223 West Walnut Rogers 72756	*Rhys A. Williams P. O. Box 1118 Harrison 72601	Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, and Washington
10.	*Charles F. Wilkins 3105 West Main Place Russellville 72801	Ken Lilly 1120 Lexington Fort Smith 72901	Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian, and Yell

*Senior Councilor

1982 OFFICERS—COUNTY MEDICAL SOCIETIES—ARKANSAS MEDICAL SOCIETY

ARKANSAS
Pres.—Gerald L. Guyer, Route 1, Box 21-D, Stuttgart 72160
Secy.—Gerald L. Guyer, Route 1, Box 21-D, Stuttgart 72160

ASHLEY
Pres.—Donald L. Toon, 315 North Alabama, Crossett 71635
Secy.—James D. Rankin, Post Office Box 232, Hamburg 71646

BAXTER
Pres.—Robert L. Baker, #10 Medical Plaza, Mountain Home 72653
Secy.—(Vacancy)
Asst. Secy.—Julia Short, 126 West Sixth, Mountain Home 72653

BENTON
Pres.—Robert E. Holder, Post Office Box 669, Bentonville 72712
Secy.—James H. Bledsoe, 1223 West Walnut, Rogers 72756

BOONE
Pres.—Thomas E. Bell, Post Office Box 1116, Harrison 72601
Secy.—Alice R. Laule, 715 West Sherman, Harrison 72601

BRADLEY
Pres.—George F. Wynne, 113 West Cypress, Warren 71671
Secy.—William C. Whaley, 205 East Church, Warren 71671

CHICOT
Pres.—Major E. Smith, Post Office Box 310, Dermott 71638
Secy.—Tom Tvedten, Lake Village Clinic, Lake Village 71653

CLARK
Pres.—N. R. Ritter, 3004 West Pine, Arkadelphia 71923
Secy.—George R. Peeples, 305 East Main, Gurdon 71743

CLEBURNE
Pres.—Stephen K. Blackburn, 421 South Seventh, Heber Springs 72543
Secy.—Wesley J. Ashabranner, 401 Searcy, Heber Springs 72543

COLUMBIA
Pres.—Franklin D. Roberts, 110 West North, Magnolia 71753
Secy.—Robert W. Hunter, 2602 Crestview, Magnolia 71753

CONWAY
Pres.—Keith M. Lipsmeyer, Post Office Box 677, Morrilton 72110
Secy.—Robert G. Bishop, Post Office Box 677, Morrilton 72110

CRAIGHEAD-POINSETT
Pres.—John A. Baldridge, 505 East Matthews, Jonesboro 72401
Secy.—Robert D. Taylor, 311 East Matthews, Jonesboro 72401
Exec. Secy.—Ruth Holden, 311 East Matthews, Jonesboro 72401

CRAWFORD
Pres.—David B. Sills, Post Office Box 16, Mountainburg 72946
Secy.—Thomas D. Yeager, 1103 Chestnut, Van Buren 72956

CRITTENDEN
Pres.—Gilbert D. Jay, III, 2500 South Rhodes, West Memphis 72301
Secy.—Keith B. Kennedy, 316 Tyler, West Memphis 72301

CROSS
Pres.—(Vacancy)
Secy.—(Vacancy)

DALLAS
Pres.—Don G. Howard, 110 North Clifton, Fordyce 71742
Secy.—John H. Delamore, Post Office Box 351, Fordyce 71742

DESHA
Pres.—Guy U. Robinson, 207 South Elm, Dumas 71639
Secy.—Howard R. Harris, 207 South Elm, Dumas 71639

DREW
Pres.—Andrew E. David, 750 H. L. Ross Drive, Monticello 71655
Secy.—Harold F. Wilson, 906 Roberts Drive, Monticello 71655
Asst. Secy.—Betty Evans, Post Office Box 538, Monticello 71655

FAULKNER
Pres.—Bob G. Banister, 923 Parkway, Conway 72032
Secy.—Bob G. Banister, 923 Parkway, Conway 72032

FRANKLIN
Pres.—(Vacancy)
Secy.—(Vacancy)

FULTON-IZARD-SHARP
Pres.—J. G. Bozeman, Family Clinic, Highway 9 North, Salem 72576
Secy.—L. G. Allen, Eastern Ozarks Community Hospital, Hardy 72542

GARLAND	Pres.—John L. Haggard, 101 Whittington, Hot Springs 71901 Secy.—Robert Borg, 100 Ridgeway Place, Suite 2, Hot Springs 71901 Asst. Secy.—Mary Payne, 911 West Grand, Hot Springs 71913
GRANT	Pres.—Jack M. Irvin, 205 West High, Sheridan 72150 Secy.—Clyde D. Paulk, Post Office Box 307, Sheridan 72150
GREENE-CLAY	Pres.—George A. Hobby, #1 Medical Drive, Paragould 72450 Secy.—Jon D. Collier, #5 Market Place, Paragould 72450
HEMPSTEAD	Pres.—George C. Garrett, 405 West 16th, Hope 71801 Secy.—Asa M. Warmack, Post Office Box 687, Hope 71801
HOT SPRING	Pres.—Russell W. Cobb, 1420 Potts, Malvern 72104 Secy.—Michael G. Justus, 214 East Highland, Malvern 72104
HOWARD-PIKE	Pres.—Joe D. King, Post Office Box 549, Nashville 71852 Secy.—Samuel W. Peebles, 120 West Sypert, Nashville 71852
INDEPENDENCE	Pres.—John R. Baker, Post Office Box 2116, Batesville 72501 Secy.—John S. Lambert, 501 Virginia Drive, Batesville 72501
JACKSON	Pres.—Jerry M. Frankum, Jr., Post Office Box 606, Newport 72112 Secy.—John D. Ashley, Second and Laurel, Newport 72112
JEFFERSON	Pres.—R. A. Irwin, 1220 West 42nd, Pine Bluff 71603 Secy.—H. M. Hegwood, Post Office Box 7863, Pine Bluff 71611 Exec. Secy.—Maggi Wadsworth, Post Office Box 8076, Pine Bluff 71601
JOHNSON	Pres.—Guy P. Shrigley, Post Office Box 70, Clarksville 72830 Secy.—Richard E. McKelvey, Post Office Box 440, Clarksville 72830
LAFAYETTE	Pres.—Craig E. Ditsch, Post Office Box 276, Stamps 71860 Secy.—Craig E. Ditsch, Post Office Box 276, Stamps 71860
LAWRENCE	Pres.—S. A. Spades, Post Office Box 719, Walnut Ridge 72476 Secy.—J. B. Elders, 321 Southwest Third, Walnut Ridge 72476
LEE	Pres.—E. C. Fields, 77 West Main, Marianna 72360 Secy.—E. C. Fields, 77 West Main, Marianna 72360
LITTLE RIVER	Pres.—Myra M. Gillean, Post Office Box 818, Ashdown 71822 Secy.—John A. Gillean, Post Office Box 818, Ashdown 71822
LOGAN	Pres.—Wayne P. Enns, Post Office Box 625, Paris 72855 Secy.—James T. Smith, Post Office Box 286, Paris 72855
LONOKE	Pres.—(Vacancy) Secy.—Byron E. Holmes, 305 West Front, Lonoke 72086
MILLER	Pres.—Robert S. McGinnis, Post Office Box 1409, Texarkana 75504 Secy.—Arlis W. Loe, Post Office Box 1409, Texarkana 75504 Exec. Secy.—Arlene Rushan, Post Office Box 1843, Texarkana 75501
MISSISSIPPI	Pres.—Jerry R. Biggerstaff, 608 West Lee, Osceola 72370 Secy.—Eldon Fairley, Post Office Box 68, Osceola 72370
MONROE	Pres.—Robert T. Miya, 106 North New York, Brinkley 72021 Secy.—Walter L. Walker, Post Office Box 151, Brinkley 72021
NEVADA	Pres.—H. Blake Crow, 327 East Second, Prescott 71857 Secy.—Michael C. Young, 301 Hale Avenue, Prescott 71857
OUACHITA	Pres.—(Vacancy) Secy.—L. V. Ozment, Post Office Box 757, Camden 71701
PHILLIPS	Pres.—(Vacancy) Secy.—L. J. Pat Bell, 626 Poplar, Helena 72342
POLK	Pres.—John P. Wood, 907 Mena, Mena 71953 Secy.—David D. Fried, Route 3, Box 194, Mena 71953

POPE — Pres.—James M. Carter, 3105 West Main Place, Russellville 72801
Secy.—W. E. King, 3105 West Main Place, Russellville 72801

PULASKI — Pres.—W. Ray Jonett, 750 Medical Towers Building, Little Rock 72205
Secy.—Warren Douglas, Medical Towers Building, #260, Little Rock 72205
Exec. Secy.—Paul Harris, 500 South University, #311, Little Rock 72205

RANDOLPH — Pres.—Andrew Jansen, Highway 90, Country Club Road, Pocahontas 72455
Secy.—Richard J. Lombardo, Route 4, Highway 90, Pocahontas 72455

SALINE — Pres.—Ralph D. Cash, 105 McNeil, Benton 72015
Secy.—Sam D. Taggart, Post Office Box 969, Benton 72015
Asst. Secy.—Carla Major, c/o Saline Memorial Hospital, Northeast at McNeil, Benton 72015

SCOTT — Pres.—(Vacancy)
Secy.—Harold B. Wright, Post Office Box 249, Waldron 72958

SEBASTIAN — Pres.—Morton C. Wilson, 1500 Dodson, Fort Smith 72901
Secy.—R. Gene Girkin, 922 Lexington, Fort Smith 72901
Asst. Secy.—Betty Stipsky, 4417 South 30th, Fort Smith 72901

SEVIER — Pres.—Kevin R. Carlson, 4th and Heynecker, DeQueen 71832
Secy.—(Vacancy)
Exec. Secy.—Jim E. Pearce, Highway 70 West, DeQueen 71832

ST. FRANCIS — Pres.—E. Morgan Collins, Jr., 1801 Lindauer, Forrest City 72335
Secy.—Christopher Woollam, 318 East Cook, Forrest City 72335

UNION — Pres.—Kenneth R. Duzan, 443 West Oak, El Dorado 71730
Secy.—Raymond N. Bowman, 619 North Newton, El Dorado 71730

VAN BUREN — Pres.—Syed Z. Tahir, Post Office Box "N", Clinton 72031
Secy.—John A. Hall, Post Office Box 310, Clinton 72031

WASHINGTON — Pres.—Thermon R. Crocker, 4255 Venetian Lane, Fayetteville 72701
Secy.—James A. Capps, Post Office Box 1203, Fayetteville 72702

WHITE — Pres.—William D. White, 2900 Hawkins Drive, Searcy 72143
Secy.—Hugh R. Edwards, 1300 South Main, Searcy 72143

WOODRUFF — Pres.—Fred E. Wilson, Post Office Box 387, McCrory 72101
Secy.—James E. Rowe, Post Office Box 387, McCrory 72101

YELL — Pres.—Jerry F. Hodges, Post Office Box 337, Dardanelle 72834
Secy.—Damon G. H. Martin, Post Office Box 328, Ola 72853



MRS. C. HERBERT TAYLOR
West Memphis
President 1982-1983
Arkansas Medical Society Auxiliary

ARKANSAS MEDICAL SOCIETY AUXILIARY CONVENTION REPORT

Mary Bonner, Secretary

The Fifty-eighth Annual Session of the Arkansas Medical Society Auxiliary met at the Arlington Hotel in Hot Springs, April 29-May 1, 1982. Over a hundred members, delegates, and guests attended during the three days of meetings.

Mrs. Raymond Peeples, President, welcomed '81-'82 and '82-'83 Board Members and guests to the convention at a Pre-Convention Board Meeting on Thursday in the Venus Suite. Special guests were Mrs. J. Edward Hill, AMAA Health Projects Chairman, Mrs. Keith D. Jones, SMAA President; and Mrs. Kemal Kutait, AMAA Legislation Chairman. The minutes of the Mid-Winter Board Meeting were read by Mrs. Larry Lawson and approved as corrected. Mrs. James Gardner gave the treasurer's report which was filed for audit. Mrs. Walter Mizell, Finance Chairman, presented the proposed Budget for '82-'83 and proposed a dues increase for the coming year of one dollar. This raises the State dues from nine to ten dollars. Both motions were passed. The need for a dues increase will be explained to County Presidents in a letter later this year.

Mrs. John Crenshaw, President of Jefferson County Auxiliary, gave background information on a resolution to be presented to the House of Delegates. Mrs. Larry Lawson, AMA-ERF Chairman, announced a raffle to raise money for AMA-ERF. The prize: a twenty-four inch string of lapis and gold beads. Needless to say, everyone hoped their ticket would be drawn. Mrs. Deno Pappas, Convention Chairman, announced a full schedule of activities which included luncheons, parties,

Past Presidents of the Arkansas Medical Society Auxiliary



Front row, left to right, Mrs. James W. Branch, Mrs. Frank Padberg, Mrs. Paul Schaefer (Honorary), Mrs. Curry Bradburn, Mrs. Lynn Harris, Mrs. A. A. Little, and Mrs. A. S. Koenig. Back row, left to right, Mrs. Gordon Oates, Mrs. Mason Lawson, Mrs. Walter Mizell, Mrs. William Hibbits, Mrs. Warren Boop, Mrs. Charles Wilkins, Mrs. Kemal Kutait, Mrs. Frank Morgan, Mrs. Curtis W. Jones, Sr., Mrs. John McCollough Smith, Mrs. Carl Wilson, and Mrs. Louis K. Hundley.

tours, baths, facials, color counseling, and exercise. Following the Board Meeting, County Presidents and Committee Chairmen discussed their jobs with their incoming counterparts and everyone enjoyed refreshments and fellowship .

On Thursday evening Auxiliary members and their spouses attended a reception hosted by Blue Cross-Blue Shield of Arkansas.

Friday morning started early, for those so inclined, with a work-out in a Jazzersize program. The Past Presidents' Breakfast was held immediately afterward. Mrs. Gordon Oates and Mrs. Frank Morgan co-hosted the breakfast and welcomed nineteen past presidents. Mrs. Oates reported, in verse, that the motto for the group was "Sex, Sanity, and Success After Sixty".

FIRST GENERAL SESSION

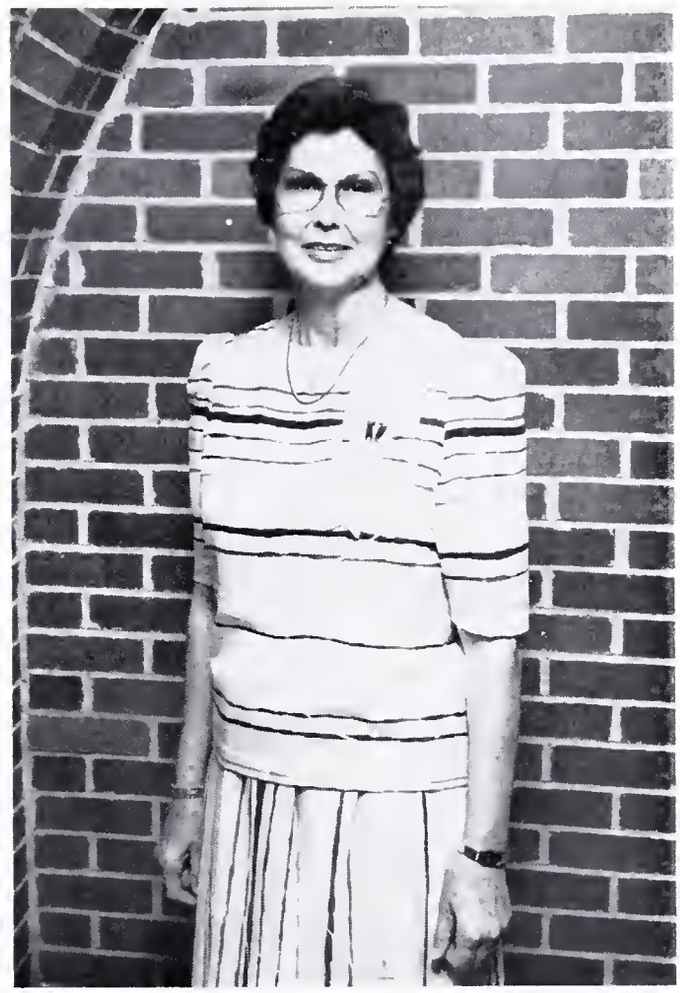
The First General Session of the Arkansas Medical Society Auxiliary convened in the Venus Suite on Friday morning, April 30, with Mrs. Raymond Peeples presiding. Mrs. Peeples welcomed members, delegates, and guests and expressed her gratitude to the membership for their support and hard work. After the invocation, given by Chaplain Mrs. Paul Meredith, Mrs. Peeples introduced special guests Mrs. J. Edward Hill, Mrs. Keith D. Jones, and Mrs. Kemal Kutait and led the assembly in the Auxiliary Pledge.

Mrs. Doane Newton, President of Garland County Auxiliary, welcomed the group to the convention and to Hot Springs. She commented that the only thing Gwen Pappas had left off the tour of the city was the lake. She invited anyone who wanted to go fishing to contact Bonnie Peeples after the meeting because " . . . she knows the lake so well she even knows where the sharks are". The response was an original poem read by Mrs. James Basinger, Northeast Regional Vice-President.

After Mrs. J. Darrell Bonner, Secretary, had called the roll and seated delegates, Mrs. J. Edward Hill gave the keynote address. In her speech, "The New Reality", Mrs. Hill observed that the private



Mrs. C. Herbert Taylor of West Memphis, president of the Arkansas Medical Society Auxiliary for 1982-83.



Mrs. Raymond Peeples, Hot Springs, 1981-82 President of the Auxiliary.

sector must take more responsibility for the welfare of the country. She said that volunteerism is increasing in importance and that auxiliaries should investigate the health needs in their counties. She stressed the importance of arranging projects which utilize the varied talents of all auxiliary members.

Convention Chairman, Mrs. Deno Pappas, announced with pride that for the first time we had "broken a hundred in registrations" making this the largest convention the Auxiliary has ever had. She invited the group to a brunch in the Card Room to hear Mrs. Mary Frances Stonecipher present a program on Color I and Color Charting, followed by an Afternoon of Beauty in the Arlington's thermal baths.

The following Convention Committees were announced: Credentials: Mrs. E. K. Clardy; Registration: Mrs. D. B. Stough, III; Courtesy Resolutions: Mrs. Louis K. Hundley; Reading: Mrs. Warren Boop, Mrs. Payton Kolb, and Mrs. Ray Jouett. The House of Delegates approved the following Board recommendations: Increase State dues by one dollar, from nine to ten dollars. Accept the '82-'83 Budget. Retain a Certified Public Accountant to help with the yearly audit of the books.

Mrs. Warren C. Boop, Nominating Committee Chairman, presented the slate of officers for '82-'83. When no nominations were made from the floor, Mrs. John McCullough Smith moved that they be accepted. The motion was seconded and passed by voice vote. The '82-83 officers are:

President — Mrs. Herbert Taylor
President Elect — Mrs. Paul Cornell
Recording Secy. — Mrs. A. Samuel Koenig, III
Treasurer — Mrs. James Gardner
District Vice-Presidents:
Northeast — Mrs. Richard Martin
Northwest — Mrs. Jimmy Haynes
Southeast — Mrs. R. E. Glasscock
Southwest — Mrs. J. C. Callaway

Sporting the results of an Afternoon of Beauty, and completely color coordinated, the Beautiful People enjoyed a Western Party on Friday evening. Barbeque, beer, and a western band set the



Mrs. C. Herbert Taylor, Auxiliary President, and Mrs. Paul Cornell, Little Rock, Auxiliary president-elect.



Auxiliary Officers for 1982-83: Mrs. C. Herbert Taylor, West Memphis, President (seated) Mrs. James L. Gardner, Treasurer, Mrs. Paul Cornell, President-elect, and Mrs. A. Samuel Koenig, Recording Secretary.

casual atmosphere for a fun evening of dancing, and would you believe inpromptu "Chair Races"?

Saturday began early with a Prayer Breakfast for Auxiliary members and members of the Arkansas Medical Society.

SECOND GENERAL SESSION

The Second General Session of the Arkansas Medical Society Auxiliary convened in the Venus Suite at 9:15 a.m. with Mrs. Raymond Peeples presiding. The invocation was given by Mrs. Paul Hogue. After the roll call and seating of delegates by Secretary, Mrs. J. Darrell Bonner, Mrs. Peeples introduced Mrs. Keith D. Jones, President of the Southern Medical Society Auxiliary. Mrs. Jones urged all members to attend the SMAA convention in Atlanta, Georgia, on October 29 and outlined activities which included guided tours and classes. She stated that Arkansas has had four presidents of SMAA and that one-third of the doctors in Arkansas are members of the Southern Medical Society.

AMA-ERF Chairman, Mrs. Larry Lawson, reported that $9,922.00 had been raised for AMA-ERF in the last year from Auxiliary projects and donations. Mrs. Gordon Oates, By-Laws Chairman, presented proposed changes in the By-Laws and recommended that they be accepted. The changes were accepted by the House of Delegates.

Mrs. Kemal Kutait, who has been elected to a second term as Chairman of the AMAA Legislation Committee, addressed the assembly. She discussed the importance of becoming politically involved in health care issues at both the local and national levels. She outlined steps which can be taken to inform oneself and others about the issues, and offered advice on the most effective way to communicate with legislators.

Members of the '82-'83 Nominating Committee elected by the House of Delegates are:

Mrs. Ray Jouett — Pulaski County
Mrs. A. Samuel Koenig, III — Sebastian County
Mrs. Charles F. Wilkins — Pope County
Mrs. James C. Bethel — Saline County
Mrs. James Kolb — Pope County

Arkansas Medical Society Auxiliary is allowed four delegates to the AMAA Convention. Since Mrs. Herbert Taylor is an automatic delegate,





Guests for the Auxiliary convention included Mrs. J. Edward Hill of Hollandale, Mississippi, Health Projects Chairman of the AMA Auxiliary, and Mrs. Keith D. Jones of Warrensburg, Missouri, President of the Southern Medical Association Auxiliary.



Mrs. Keith Jones, President of Southern Medical Auxiliary, (standing, right) with Mrs. Frank Morgan of North Little Rock, Councilor to Southern (standing, second from left) and Mrs. Lynn Harris of Hope, Vice Councilor to Southern (standing left), Mrs. Curry Bradburn and Mrs. Raymond Peeples.



Mrs. Raymond Peeples, State Auxiliary President for 1981-82, and Mrs. Kemal Kutait, Legislative Chairman for the American Medical Association Auxiliary.

three were elected by the voting members of the group. They are: Mrs. John Crenshaw, Mrs. Paul Meredith, and Mrs. Paul Cornell. Mrs. Taylor was empowered to name an alternate delegate.

Reports of the County Presidents were given with Regional Vice-Presidents moderating. The meeting was recessed for lunch. The Crittenden County Auxiliary hosted the luncheon which was held at Hot Springs Country Club. After the invocation, given by Mrs. Robert Ford, awards were presented by Mrs. Frank Morgan, Doctor's Day; Mrs. Herbert Taylor, Membership; and Mrs. Larry Larson, AMA-ERF. Mrs. Lawson conducted the drawing for the AMA-ERF raffle. The lapis and gold bead necklace was won by Mrs. J. Darrell Bonner. Mrs. Warren Boop won the framed original drawing by Janice Polychron which was used on this year's Christmas Sharing Card. Mrs. Deno Pappas conducted the drawing for the numerous and coveted door prizes.

Mrs. William J. Wright installed the new officers and presented each with a handmade linen handkerchief. Mrs. Peeples presented the president's pin to Mrs. Taylor and accepted her Past-President's pin. After Mrs. Taylor's inaugural address, the Fifty-eighth Annual Meeting was adjourned.

On Saturday evening members attended the Inaugural Ceremony in which Dr. Morriss Henry was installed as President of the Arkansas Medical Society and the reception which followed. On Sunday morning Auxiliary members joined members of the Arkansas Medical Society for a Memorial Service. Following a Post-Convention Board Meeting a very successful convention came gracefully to an end.

A Review of Reported Cases of Typhoid Fever and Documented Carriers in Arkansas

Paul C. White, Jr., M.D.,* Robert C. Walls, Ph.D.,** and Edward A. Gresham, M.D.***

The first law pertaining to the reporting of Communicable Diseases in the state of Arkansas was Act 96 of 1913.[1] It gave a list of notifiable diseases that must be reported to the State Health Department within 24 hours. A record of the reports of these diseases has been kept by the Department of Health's Communicable Disease Division on card files. Recently, an upgrading of these files was undertaken. This paper reviews a portion of the resultant findings concerning typhoid fever.

METHODS

Typhoid fever became a reportable disease in 1925, however, records are not available on both the cases and carriers before 1938. Information is available by patient's name, age, sex, race, address, county and date of onset.

The law requires that once a person is documented as being a carrier he has to sign an agreement and is contacted annually by a Public Health Nurse who verifies his domicile and obtains a stool specimen for culture. The typhoid carrier agreement states that the carrier will not handle foodstuffs, will not cook except for himself or his immediate family, will wash his hands with soap and water after each visit to the toilet and will notify the Department of Health in advance of any change in address.[1] An updated register is maintained on each carrier. This additional information on carriers provides their age at diagnosis, age at death and, when applicable, the reason for their removal from the register.

The above data as recorded on the file cards of the cases and carriers were analyzed as follows: cases by year; case rates by county; carriers by year of discovery; current number of carriers by age at diagnosis, by years as a carrier, and by sex and race; and carriers removed from the registry by sex and race.

RESULTS

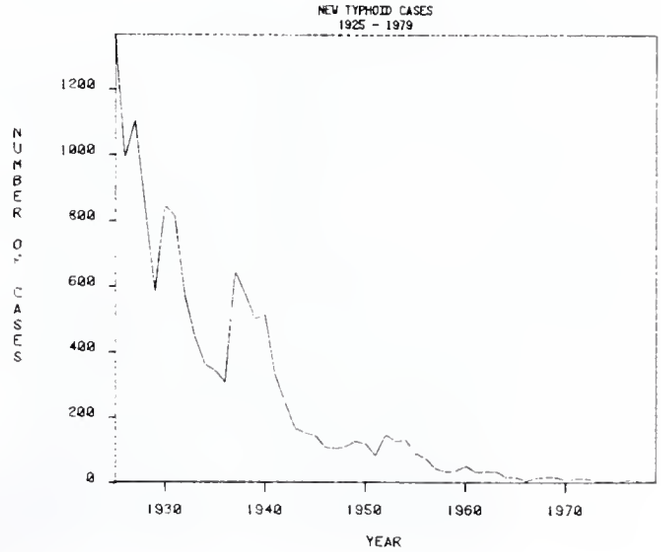
There has been a total of 13,446 cases of typhoid fever reported in Arkansas from 1925-79. The greatest number of cases reported for a one-year period was in 1925, the initial year that reporting began. In that year, 1367 cases were reported. After 1928 the number of cases demonstrated a general decline except for a temporary increase in the early 1930's and again in the late 1930's. There have been less than 100 cases reported annually since 1954 (Figure I).

The case rate per 10,000 population by county for the 37-year period of 1942-78 is shown in Figure II. The 1960 population was used as a base and the period chosen spans that time. The case rate varied from the lowest category of 0-9 cases per 10,000 in 15 counties to the highest category of 30+ cases per 10,000 in 4 counties. This geographical distribution of observed case rates does not, however, reveal a pattern suggestive of causes.

Figure III shows the number of carriers by year of discovery. The number ranged from a low of 0 in 1943 and 1979 to a high of 22 in 1952. Beginning in 1938, there have been 252 documented carriers listed on the registry and of this number, 215 have been removed from the list for various causes, leaving 37 active.

Of the 215 carriers removed from the register, 124 died, 45 moved and 46 were released because the carrier converted to negative. The average age at death was 78 years and the average age at time of diagnosis was 57 years. Table I shows the breakdown by race and sex. Twenty-one percent of both sexes were black and 79 percent of both sexes were white. Twenty-seven percent of each race were male and 73 percent of each race were female.

FIGURE I
NEW TYPHOID CASES
1925 - 1979



*District Health Director, Georgia Department of Human Resources, 1109 N. Jackson Street, Albany, Georgia 31708 (formerly Director of Communicable Disease Control, Arkansas Department of Health).
**Head, Division of Biometry, University of Arkansas for Medical Sciences, Little Rock, Arkansas 72205.
***2419 Blackwood Road, Little Rock, Arkansas 72207.

The current register lists 37 active typhoid carriers. Their average age at diagnosis was also 57 years and their current average age is 74 years. The youngest is 47 and the oldest 91 years of age. The average number of years they have been listed as a carrier is 17 and the range is from 1 to 37 years. Table II shows the breakdown by race and sex. Sixty-two percent are females and 38 percent males. Blacks comprise 32 percent and whites 68 percent. The current list of carriers reside in 23 counties with only three counties having as many

TABLE I
NUMBER OF CARRIERS (%) REMOVED FROM REGISTRY BY SEX AND RACE 1938-1979

	Black	*White*	*Total*
Male	12 (21)	45 (79)	57 (100)
Female	33 (21)	125 (79)	158 (100)
TOTAL	45 (21)	170 (79)	215 (100)

= Individual (#) = % of Total

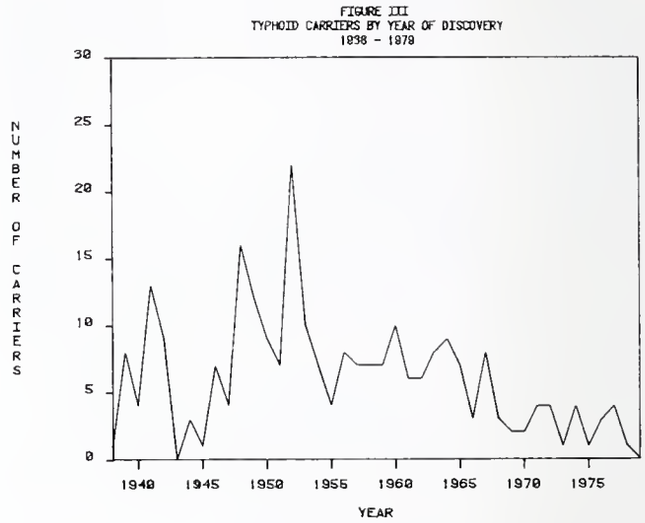
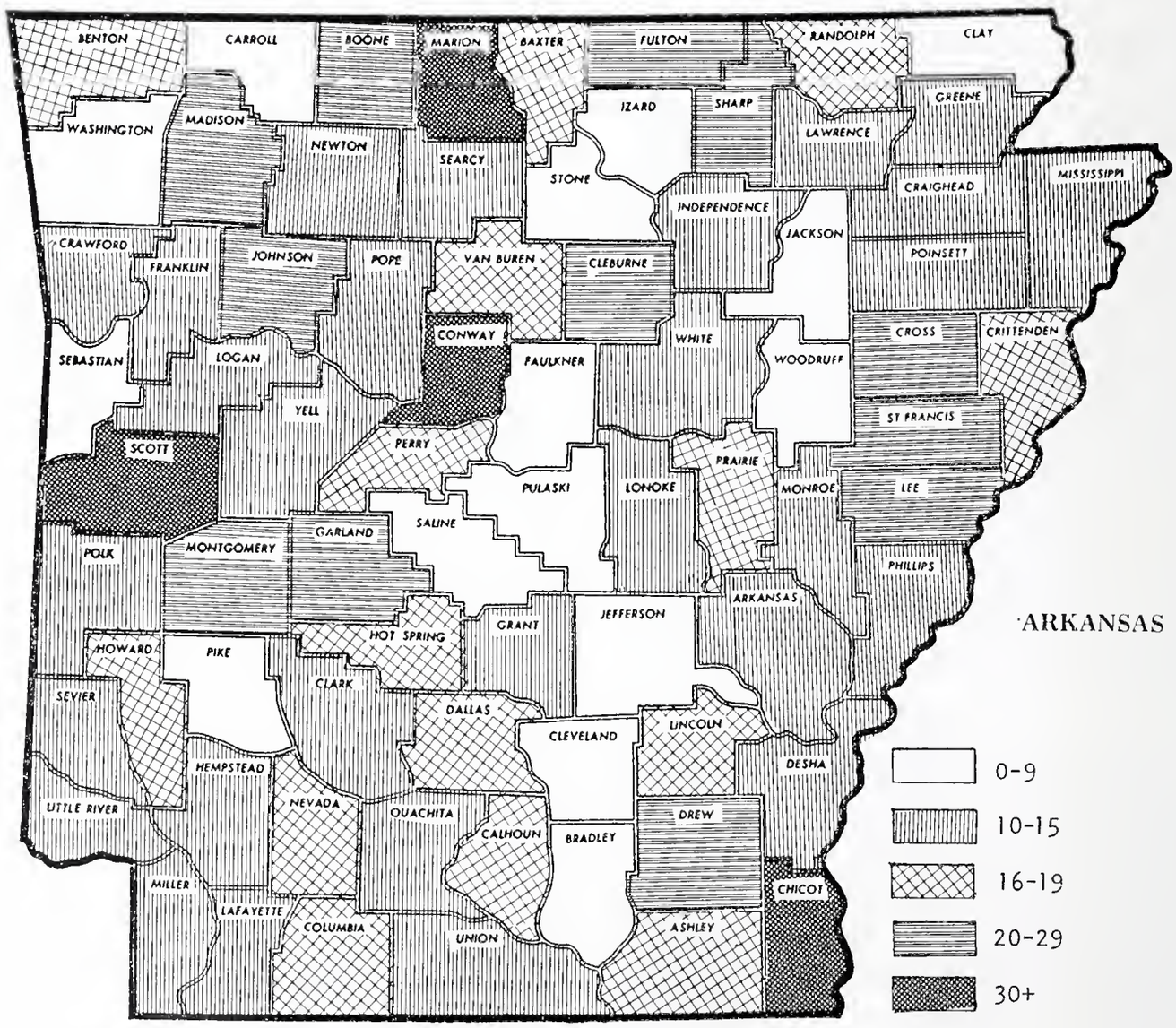


Figure 2

Typhoid Rates* (Cases/10,000) By County, 1942-78



as three carriers each. These three counties are Clay, Mississippi and Faulkner.

DISCUSSION

The cases of typhoid fever in Arkansas have followed the same general downward trend as those reported for the United States.[2] For the past 15 years the number of cases has remained relatively steady. The large number of cases reported in the early years of reporting can be partially attributed to the diagnostic procedures and interpretations employed at the time. The definitive diagnostic procedure is isolation of the organism. It has only been in recent decades that this has become more widely used as confirmation of cases. Serological tests are still widely used but they are nonspecific, poorly standardized, often confusing and difficult to interpret.[3]

In 1979, there were 647 isolates of *S. typhi* reported in the nation: 50 were from carriers, 153 from infected patients and the rest were undesignated.[4] For the five-year period of 1975-79 in Arkansas, a total of 23 cases were reported, ten of which were carriers. The remaining 13 cases were related to these carriers. However, none of the above 10 carriers was found listed in either the case or the carrier registers. This casts doubt on the validity of maintaining a carrier register, particularly because of the costs incurred by the law requiring an annual stool examination and visit by a nurse.

It is true that the carrier register has not been well maintained. At the time it was reviewed in 1979, there were 94 carriers listed but, of this number, 57 should not have been on the list since they had either died, moved or were no longer carriers. It was evident that the register had not been reviewed in detail for a number of years. Information on the patients' card file revealed several carriers who had undergone choleycystectomy as much as ten years before and had then converted to negative on their annual stool examinations. If the register is to be maintained this at least points out the need for thorough annual evaluations of all carriers in order to avoid the effort and time spent by health department staff in making continued annual visits and laboratory examinations after these have become unnecessary. Several persons could have been released from carrier status and from the restrictions required by the carrier agreement much earlier than was done.

TABLE II
CURRENT NUMBER (%) OF CARRIERS BY SEX AND RACE

	Black	*White*	*Total*
Male	6 (43)	8 (57)	14 (100)
Female	6 (26)	17 (74)	23 (100)
TOTAL	12 (32)	25 (68)	37 (100)

= Individual (#) = % of Total

It is natural to question whether travel could account for some of the Arkansas cases. Nationally, typhoid isolates were evaluated for the period 1967-1972 and during this period the yearly number of travel-associated cases rose 270 percent. This increase was largely due to cases associated with Mexico.[5] Another study on typhoid fever in the United States for the period of 1975-1976 listed 209 bacteriologically confirmed cases and of the 200 cases in persons with known travel history, 66 (33%) were acquired during travel outside the United States.[6] However, for the past five years in Arkansas, this trend is not evident since all of the 23 cases gave no history of travel outside the United States.

In Arkansas then, we have been finding indigenous carriers not previously on our list. However, the youngest carrier on the Arkansas list is 47 years old and the mean age of all on the list is 74 years. Since the first priority in the investigation of any case is the discovery of the carrier we believe that this may truly reflect an aging carrier population in Arkansas. If so, the reservoir of carriers and typhoid fever itself will be further reduced or eliminated in Arkansas except as it may be introduced by a traveler.

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A Five Year Update on Rocky Mountain Spotted Fever in Arkansas

T. C. McChesney, D.V.M.,* J. P. Narain, M.D.,** and J. P. Lofgren, M.D.***

There were 35 cases of Rocky Mountain Spotted Fever (RMSF) in Arkansas during 1981. This is the second highest annual total on record in the State Health Department. Four of the reported cases were fatal. This data emphasizes the necessity of suspecting RMSF for patients who have any or all the cardinal symptoms of the disease: fever, rash, headaches, a history of a recent tick bite or of having been in a tick-infested area especially during summer months. The geographic distribution of RMSF is diffuse, and thus almost all physicians have the possibility of seeing a case. Patients with suspected cases should be started on specific therapy immediately without waiting for serologic confirmation. The Weil-Felix or febrile agglutinin test is not specific and like other serologic tests, is often not positive until at least 10 days after the onset of illness. By this time irreversible tissue damage or even death may have occurred.

1. INCIDENCE —

The name, Rocky Mountain Spotted Fever, is misleading, because most cases now occur in the South Atlantic States. The alternate name, tick-borne typhus fever, is more descriptive of the disease and does not mislead one into believing that the disease is primarily one of the Rocky Mountain states. In 1981, 57% of the cases occurred in the South Atlantic states. Historically, North and South Carolina, Oklahoma, Virginia, Tennessee, and Georgia have had the most cases, with Arkansas ranking closely behind the leaders.[1] Few cases have been reported from the Rocky Mountain region. Data on RMSF in each state is obtained from physicians' reports. Each time a case is reported, a standard case report form (CDC 55.1) is sent to the attending physician and detailed epidemiologic, clinical, and laboratory information is obtained. Since 1977, 144 cases of RMSF have been reported to the Arkansas Department of Health. In the same period, 13 deaths have occurred for a case-fatality rate of 9.0 percent. In Arkansas since 1978, a general increase in incidence has been noticed. Both annual incidence and case fatality rates are consistently higher in Arkansas than the national average (Table I).

2. DISTRIBUTION —

Over the past five years cases of RMSF were uniformly distributed over all counties in Arkansas except the Mississippi delta agricultural area which is sparsely populated (Fig. 1). The largest proportion (16%) were reported from Pulaski County which is the most populous.

Data on age and sex distribution of RMSF cases for years 1977-1981 are shown in Table II. During the five year period, surveillance data received showed 56 cases among males and 61 among females. More of the female patients were in the younger age groups, whereas this pattern

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TABLE I
INCIDENCE OF ROCKY MOUNTAIN SPOTTED FEVER AND CASE-FATALITY RATES IN THE ENTIRE UNITED STATES AND ARKANSAS, 1977-1981

	UNITED STATES		*ARKANSAS*		**Case Fatality*
Year	*Cases*	*Rate 100,000*	*Cases*	*Rate 100,000*	*Rate % (Ark.)*
1977	1153	.54/100,000	55	2.50/100,000	12.7
1978	1063	.49/100,000	13	.59/100,000	7.7
1979	1070	.49/100,000	15	.68/100,000	6.7
1980	1156	.51/100,000	26	1.18/100,000	—
1981	1165	.51/100,000	35	1.59/100,000	11.4

*The national case-fatality rate has fluctuated between 3% and 8% since 1970.

Fig. 1 ROCKY MOUNTAIN SPOTTED FEVER, REPORTED CASES BY COUNTY, ARKANSAS 1977 - 1981.

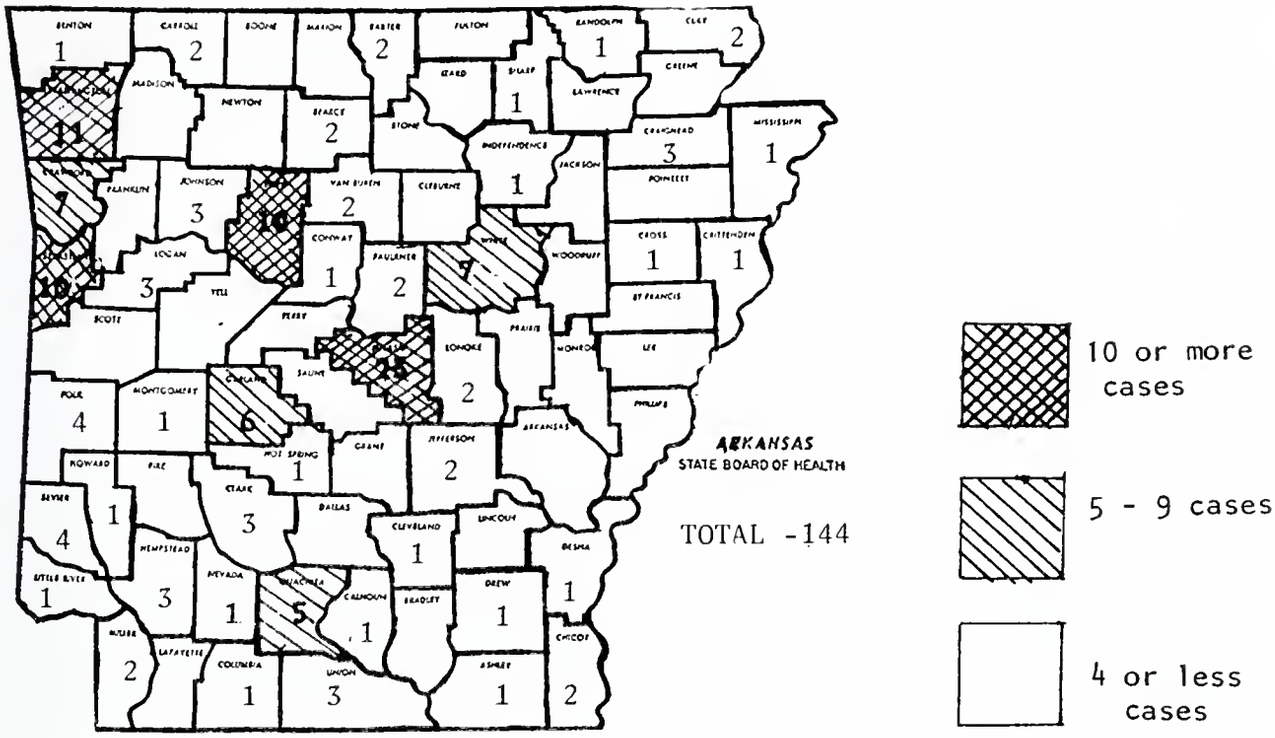


Figure 1

was not seen among male patients. Overall, however, more cases occurred among persons younger than 30 years of age.

RMSF is largely a disease of summer, with the largest number of cases occurring between April and September (Fig. 2). The seasonal pattern is explained by the fact that humans are more likely to frequent outdoor areas during the summer months at the height of the tick season. During this period, larvae, nymph, and adult ticks are seeking out a host to feed on.

3. CLINICAL CHARACTERISTICS –

After infection with the rickettsial agent, antibody formation may not occur for ten to fourteen days after the onset of symptoms. Therefore, diagnosis and treatment must be based on the history of tick exposure and clinical symptoms. Fever, rash, and headaches are the predominant symptoms of RMSF. The fever is usually of sudden onset, and the temperature may rise to 104°F-106°F.

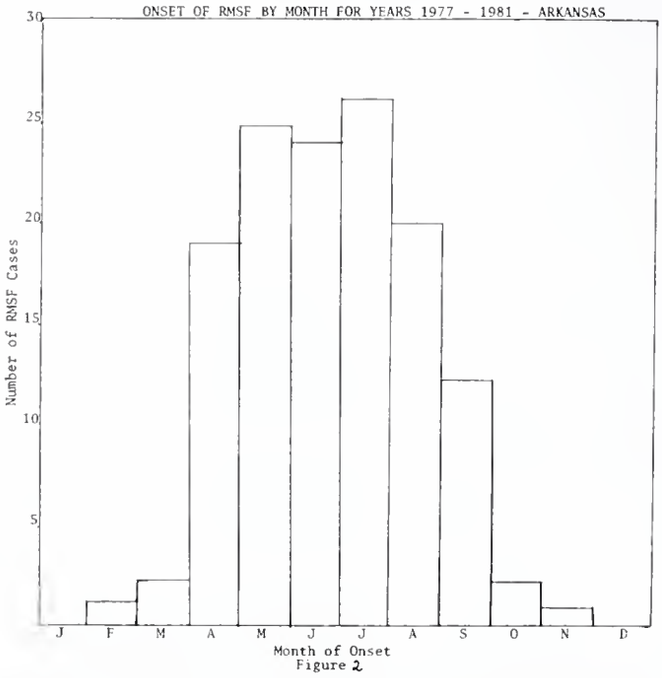
The rash is probably the most important clue and usually appears two to three days after the onset of illness. The lesions are initially erythematous and macular, about 2-4 mm in diameter, and blanch on pressure. Later they may become

TABLE II
NUMBER OF RMSF PATIENTS BY AGE AND SEX, ARKANSAS, 1977-1981

	Male		*Female*		*Total*	
Age Group	*Number*	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
4	8	14.2	4	6.6	12	10.3
5- 9	11	19.6	15	24.6	26	22.2
10-19	4	7.1	12	19.7	16	13.7
20-29	10	17.8	8	13.1	18	15.4
30-39	6	10.7	5	8.2	11	9.4
40-59	12	21.4	9	14.7	21	17.9
60 +	5	8.9	8	13.1	13	11.1
TOTAL	56	100	61	100	117	100

Surveillance data not available on all 144 cases reported

Figure 2.
CASES OF RMSF BY MONTH OF ONSET OF ILLNESS, ARKANSAS, 1977-1981



maculopapular, petechial, hemorrhagic, and darkened. The rash usually starts on the wrists and ankles and spreads to the trunk, palms, and soles (Fig. 3). About 80% of the patients develop rash on the palms and soles; this is a useful diagnostic tool (Table 3). However, cases can occur without detectable rash, or the rash may appear late in the clinical course.

The headache persists, is quite severe, and responds poorly to therapy. There may be varying degrees of malaise, myalgia, gastroenteritis, adenopathy, and confusion. Also influencing the diagnosis to a lesser extent would be a thrombocytopenia, which some studies have shown to be present in over 40% of the cases depending on the stage of the disease,[2] and in some cases serum sodium levels have reportedly been reduced.[3]

4. HISTORY OF TICK EXPOSURE —

In addition to a symptom complex of fever, rash and headache, a history of tick exposure especially during warm weather should strongly suggest RMSF. Patients that have the tick that has bitten them or have ticks from the family dog or the immediate habitat area should submit these in test tubes stoppered with cotton, each containing one drop of water, to the Health Maintenance Division, Arkansas Department of Health. If alive when received, the ticks will be sent to the Rocky Mountain Laboratory at Hamilton, Montana, for RMSF group rickettsial testing.

It may be that dogs are not man's best friend in RMSF areas since they often harbor and transport ticks to the family environment. Body fluids or feces from infected ticks ruptured when picked off the dog could be infectious to humans through mucous membranes or breaks in the skin. Dogs that frequent the woods and outdoor areas in the



Figure 3.
WRIST AND HAND OF CHILD WITH RMSF
(Courtesy: Centers for Disease Control)

TABLE III
NUMBER OF RMSF PATIENTS BY HISTORY OF TICK EXPOSURE AND CLINICAL MANIFESTATIONS, ARKANSAS, 1977-1981

History of Tick Exposure	*Information Available*	*Positive History*	*Percentage*
Yes — Tick bite	33	21	63.6
Visited tick infested area.	33	8	24.2
TOTAL	33	29	87.8
No History	33	4	12.1
Symptoms			
Fever	24	23	95.8
Rash	34	29	85.3
Headache	22	17	77.3
Myalgia	23	15	65.2
Rash on palm and/or sole	21	13	61.9

summer should be dipped periodically with residual insecticidal preparations that are available from practicing veterinarians. Medicated collars may prevent fleas from being on the dog but not kill the ticks. If ticks are removed manually from the dog or a person, it is advisable to wear rubber gloves or place a tissue between the fingers and point of attachment of the tick and then gently pull the tick off. There have been some reports of RMSF among dogs which are usually asymptomatic or show symptoms of depression and fever for a few days followed by recovery.[4] Ticks that feed on diseased dogs may be infectious to humans.

The three most common species of ticks found in Arkansas that may carry *Rickettsia rickettsii* are: *Dermacentor variabilis,* the American dog tick (coloring includes varying degrees of white and yellow markings on the back); *Amblyomma americanum,* the Lone Star tick (the female has a silvery white spot on its back); and *Rhipicephalus sanguineus,* the Brown dog tick (a pallid reddish-brown color), which is commonly found on dogs but seldom bites humans. The disease in ticks is transmitted transovarially; therefore, the three-legged larval tick, the four-legged nymphs, and the adults may all be infectious. The percentage of ticks that harbor RMSF in Arkansas is unknown. Tick surveys conducted in areas with endemic RMSF showed 1%-1.5% to be carriers of the RMSF group Ricksettsia.[5]

Infected ticks must remain attached to a person for several hours in order to transmit the disease. The blood meal activates the rickettsia and allows them to enter the human body. Therefore, when in tick infested areas, one should continually look for attached ticks—which should be removed immediately. Ticks are usually in the grass and ground cover along pathways and not up in trees or on branches. On the human body, they tend to travel upward and attach at most any location.

5. CHANGE IN DIAGNOSTIC CRITERIA —

Traditionally, diagnosis of RMSF has been based on the Weil-Felix test, and a rise in antibody titer was considered diagnostic. Though a convenient test, Weil-Felix often gives positive results that are later proven to be nonspecific. Infections with agents such as *Proteus* and diseases such as relapsing fever and murine and epidemic typhus also cause a positive reaction in the Weil-Felix test. In addition to false-positive reactions, there are also false-negative reactions. In a study of 504 cases of RMSF reported to the Centers for Disease Control (CDC) only 60% of patients tested had a positive Weil-Felix reaction, and only 52% had a four-fold rise when paired serum specimens were tested.[6]

With the availability of new specific and sensitive tests, CDC recently recommended a revision of its diagnostic criteria for RMSF.[7] In the future, the Arkansas Department of Health will classify reported cases as Probable, Confirmed, or Not Confirmed based on the following criteria: *Confirmed* cases are defined as: 1) a four-fold rise in titer of antibody to the spotted fever group antigen by indirect fluorescent antibody (IFA), complement fixation (CF), microagglutination (MA), latex agglutination (LA), or indirect hemagglutination (IHA), or a single high titer of $\geq$ 16 by CF or 64 by IFA in a clinically compatible

case; 2) positive immuno-fluorescence of skin lesion biopsy or organ tissue (autopsy); or 3) isolation of *Rickettsia rickettsii*. Please note that a case can only be designated as confirmed on the basis of appropriate laboratory test results. A *Probable* case is a subset of the cases as defined for confirmed, with laboratory results from the less specific, less sensitive Weil-Felix (*Proteus*) test used for diagnosis. A single titer of $\geq$ 320 by *Proteus* OX19 or a four-fold rise in *Proteus* OX19 or OX2 in a clinically compatible case will be considered a *Probable* case.

The Arkansas Department of Health continues to urge physicians to report any case felt to be RMSF. However, they should be aware that (depending on serologic evidence or lack of such) such a case may be labeled Confirmed, Probable, or Not Serologically Confirmed.

These changes were made simply for easier analysis of data. Unfortunately this new report form and the new classification of reported cases did not go into effect until mid-1981. Therefore, the data reported for 1981 includes both confirmed and probable cases. The 1982 statistics will be under the new system.

Acute-phase and convalescent-phase serum samples should be drawn whenever possible and may be submitted to the Public Health Laboratory, Arkansas Department of Health. The complement fixation (CF) test or indirect fluorescent antibody (IFA) test will be run. Results of these tests are specific for RMSF and are confirmatory.

6. FATAL RMSF —

Four of 35 persons reported to have RMSF in 1981 died. Surveillance reports of patients who died of RMSF almost always show delayed treatment with the antibiotic of choice (Table IV).

In three fatal cases, the treatment with appropriate antibiotics was started when the illness had reached terminal stages, and death followed. In a previously controlled study of 44 fatal RMSF cases, the delay in diagnosis and treatment of patients who died was attributed to late appearance of rash, uncertain history of tick bite and to initial nonspecific symptoms leading to diagnosis of other diseases.[8] Diagnosis of RMSF should be suspected when a patient has fever, headache, history of tick exposure during summer, or with a rash especially on palms or soles; and prompt treatment must be initiated.

The treatment of choice is tetracycline 25-50 mg/kg/day or chloramphenicol 50 mg/kg/day orally in four divided doses. Usually after 5 to 7 days the temperature returns to normal and treatment can be stopped two or three days later. Tetracycline and chloramphenicol are quite specific against this rickettsial disease and other antibiotics seem to have little or no therapeutic effect.

Currently there are no approved immunizing agents for RMSF on the market. Vaccines have been used in the past with questionable results. Work is continuing on the development of a suitable vaccine.

7. REPORTING —

"The Rules & Regulations Pertaining to Communicable Disease Control" adopted by the Arkansas State Board of Health classifies RMSF as a notifiable disease and places the responsibility for reporting on physicians, practitioners, hos-

TABLE IV
SELECTED CHARACTERISTICS OF FATAL RMSF CASES, ARKANSAS, 1981

CASE	AGE/SEX	DATE			LABORATORY TEST				
		ONSET SYMPTOMS	TREATMENT STARTED WITH EITHER TETRACYCLINE OR CHLORAMPHENICOL	EXPIRED	OX19	OX2	OXK	CF	IFA
#1	44 M	28 Apr.	4 May	17 May	1:80 1:40 1:80	Neg.	Neg.	<1:8	1:64
#2	14 F	9 Aug	15 Aug	17 Aug	-	-	-	1:8(8/16) 1:16(8/17)	1:256
#3	11 F	10 Sept	16 Sept	17 Sept	Neg.	Neg.	-	<1:8	1:512
#4	53 M	13 Sept	19 Sept	19 Sept	Neg.	Neg.	-	-	+ * R.R. identified

*Rickettsia rickettsii organism

pitals, clinics or any person in attendance on a case declared notifiable. The state wide toll free reporting system number is 1-800-482-8888. Your timely reporting of the notifiable diseases is much appreciated and is the primary way the Arkansas Health Department becomes aware of communicable diseases that are of importance to the medical community.

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Rubella Susceptibility in South Arkansas

Wayne G. Elliott, M.D.*

Routine assessment of rubella immunity has been advised for women in the child bearing age at the following points in their lives: (a) Enrollment in post secondary school education or military service. (b) Premarital examination. (c) Prenatal care. (d) Hospital employment.[1] Our laboratory has routinely determined the presence/absence of immunity as a part of prenatal laboratory studies and as part of hospital pre-employment laboratory studies for the past seven years. Figures for the past three years are available (Table I).

Rubella immunization has been an Arkansas pre-school immunization requirement since the early 70s. The practice has virtually eliminated periodic rubella epidemics in the pediatric population that occurred in six to nine year intervals. Correlatively, the elimination of these recurrent epidemics in children has resulted in a similar eradication of Congenital Rubella Syndrome among Arkansas neonates with only one case having been reported in the state since 1970.[2] Nationally, the incidence of Congenital Rubella Syndrome has not experienced as dramatic a decline.

In contrast to successful U. S. immunization practice, British recommendations have emphasized immunization of prepubertal females and post partum, non-immune women. Their alternative schedule has been notably marred by recurrent rubella epidemics and the spread of rubella to the obstetrical population.[3]

TABLE I
RUBELLA SUSCEPTIBILITY
IN SOUTH ARKANSAS

	Immune	*Susceptible*	*Susceptible (%)*
1979	1613	244	13
1980	1627	229	12
1981	1549	268	14.7

Serologic titers of 1:8 or greater by passive hemagglutination method indicate immunity. Tests performed by the Associated Pathologists' Laboratory.

RUBELLA SUSCEPTIBILITY IN ARKANSAS

	Immune	*Susceptible*	*Susceptible (%)*
1980	6270	697	11.1

Figures provided by V. P. Narain, M.D., Arkansas Department of Health.

*Associated Pathologists' Laboratory, P.A., 443 W. Oak Street, El Dorado, Arkansas 71730.

Comparison of the percentages of non-immune women in our laboratory population with those of the Department of Health survey reveals roughly comparable figures. Our population includes women of all reproductive age groups, races, and socioeconomic classes while the Department of Health's group is limited to a lower socioeconomic group.

The percentage of non-immune women has remained rather static over the past three years and compares with the experience of other groups.[4] Since the oldest age group to receive mandatory immunization in 1970 (approximately age 6 at that time) would be approaching age 18 in 1982, we should anticipate a gradual improvement in the immune status of the obstetrical population. Because of this hiatus in immunity between adults and children, rubella infections, though markedly reduced in total number, have shifted to persons in the 20-30 year age group. A recent epidemic among college students in Arkansas readily demonstrates this shift. It is precisely child bearing women in this age group who remain at greatest risk and where levels of immunity are the lowest.

Prior public health recommendations which denied immunization to adults may be changed by the Arkansas Department of Health to provide for immunization of non-immune adults. Following a recommendation by the U. S. Public Health Service Advisory Committee on Immunization Practices, the Board of Health now proposes to immunize (1) Males and females until through with school (whether high school or college) to prevent epidemics, (2) Females in their child bearing years (to prevent Congenital Rubella Syndrome), (3) Males and females in the health professions who come in contact with women in their child bearing years (to prevent outbreaks in the medical setting). Because of funding shortages and the expense of testing for immunity, all targeted individuals will be immunized unless they can provide prior evidence of immunization or immunity. The hazards of fetal infection by attenuated vaccine virus, the side effects of arthralgia, fever, and lymphadenopathy are considered to be of sufficiently remote risk to prompt this change in policy. The current RA27/3 (Almevax) has been shown to be of sufficiently

attenuated nature to have a low morbidity in contrast to earlier vaccines.[5, 6]

On the basis of the current Arkansas susceptibility rates as shown by our figures and those of the Department of Health, these policy changes should be vigorously supported by Arkansas physicians.

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ELECTROCARDIOGRAM OF THE MONTH

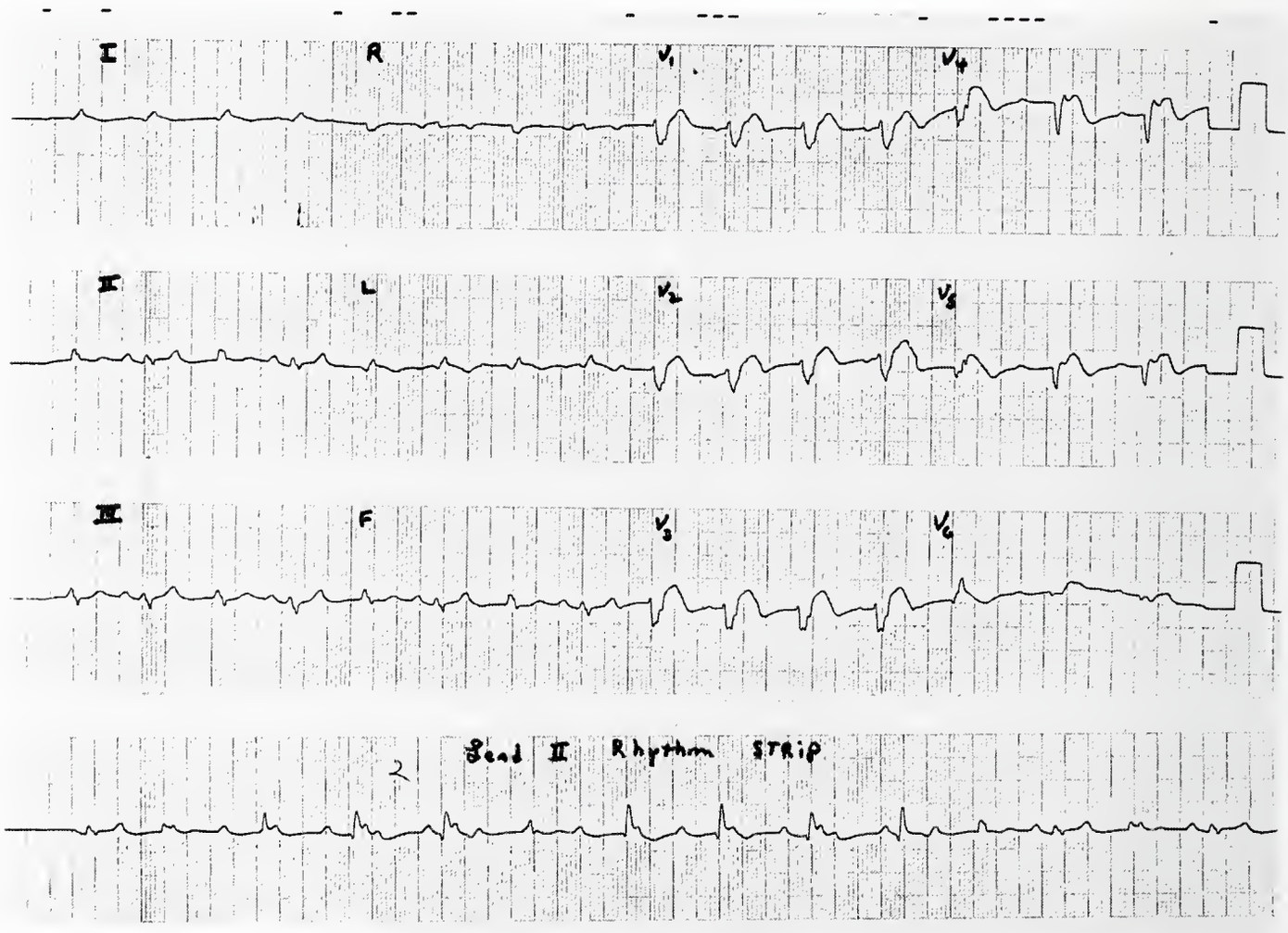
The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 80)

HISTORY: M. P. was a 67-year-old lady who presented with a recent episode of severe chest pain followed by shortness of breath. On examination, she was found to be cool peripherally, was confused and poorly oriented, and had a blood pressure of 80/40 mmHg, rales, and an S_3 gallop. Her chest film was compatible with pulmonary edema. The admission ECG with a rhythm strip is shown here.

On the basis of the information furnished, please respond true or false to the following remarks:

1. Lidocaine should be started.
2. Indications for pacing are present.
3. Therapy for "cardiogenic shock" is indicated.
4. Her long term prognosis is that of most other patients undergoing treatment for myocardial infarction.



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Office Orthopaedics

The Foot and Ankle: One Year's Experience: Part I

I. Leighton Millard, M.D.*

This paper was presented as part of a Continuing Education for Physicians Seminar at the University of Arkansas Medical Sciences Campus in October of 1981. The seminar was entitled "Office Orthopedics for the Family Physician." When Dr. Saltzman asked me to participate in this program, I elected to review the foot and ankle problems treated by the Little Rock Orthopedic Clinic in the year 1980. It seemed to me that discussing some of the more common problems, without going into detail, might be conducive to keeping our "Diagnostic Suspicion Titer" (DST) elevated. The review of medical records by diagnostic category at Little Rock Orthopedic Clinic produced 236 ankle problems. I grouped these problems as seen in Table I and summarized them for discussion purposes in Table II.

A word of explanation is necessary here in regards to diagnostic category. In Table I, the cases are listed just as they first appeared to the Orthopedist. Table II shows groupings and combinations of the original, as well as secondary, diagnoses. It is obvious that I rounded off the percentages in Table II to simplify discussion.

*Little Rock Orthopedic Clinic, 9500 Lile Drive, P. O. Box 5270, Little Rock, Arkansas 72215.

TABLE I
1980 — Little Rock Orthopedic Clinic — Ankle Problems — 236

1.	Sprains	73	30.9%
2.	Unstable	17	7.8%
3.	Lateral Malleolus Fractures	29	12.2%
4.	Medial Malleolus Fractures	7	2.0%
5.	Bi-Malleolar Fractures	31	13.2%
6.	Tri-Malleolar Fractures	3	1.2%
7.	Tendinitis	22	3.8%
8.	Osteoarthritis	19	2.9%
9.	Rheumatoid Arthritis	3	2.9%
10.	Distal Tibial Epiphysis Fractures	9	0.8%
11.	Talus Fractures	7	0.8%
12.	Contusions	7	0.4%
13.	Tumor	2	0.4%
14.	Deformity 2° to Old Fracture	2	0.4%
15.	Tarsal Tunnel	1	0.4%
16.	Congenital Anomaly	1	0.4%
17.	Os Trigonium Fracture	1	0.4%
18.	Old Burn	1	0.4%
19.	Ruptured Achilles Tendon	1	0.4%

Ankle Sprain Injuries

Ankle Sprain: A joint injury in which some of the fibers of the supporting ligament are ruptured, but the continuity of the ligament remains intact[1] (Fig. 1).

The sprained ankle problem needs to be assessed from both bony and soft tissue injury aspects. AP, lateral and oblique x-rays are necessary to rule out tibio-talar fracture or dislocation, or widening of the tibio-talar syndesmosis. Should none of these significant injuries be present, then the patient will need treatment according to the

TABLE II
1980 — Little Rock Orthopedic Clinic — Ankle Problems — 236

		Number	*Percent*
1.	Sprain and/or unstable	90	38.8
2.	Malleolus Fractures	70	30.0
3.	Tendinitis	22	9.0
4.	Arthritis	22	9.0
5.	Peri-Malleolar Fractures	16	7.0
6.	Miscellaneous	16	7.0
		——	
		236	

amount of swelling and pain resulting from the ligament injury. It is important to assess from the history and examination any medial ligament damage of the ankle because significant injury in this area (the deltoid ligament) (Fig. 3), requires prompt surgical repair. When significant symptoms and findings are present at the medial ankle, it is best, in most cases, to carry out immediate

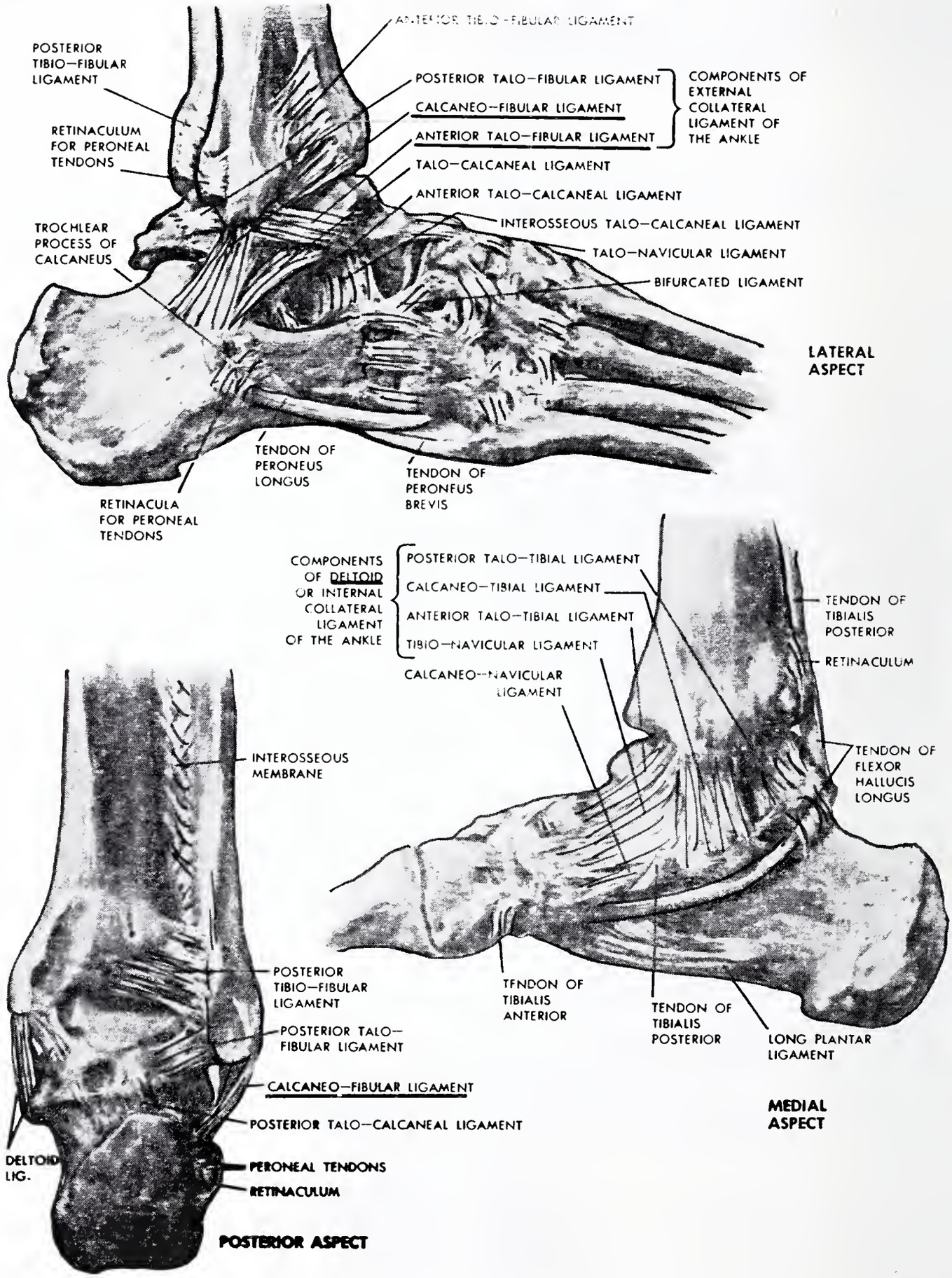


Figure 1.

stress testing under local anesthesia as described by Dr. Barry Sorrells in the Journal of the Arkansas Medical Society (June, 1979). Complete tear of this deltoid ligament can then be diagnosed and operated early. Should this injury be identified early enough, an arthrogram may well be of use in selecting those cases that need early surgical repair.[2]

The more common inversion sprain injury of the ankle (Fig. 2) should be bandaged and protected from weight bearing until pain and swelling have decreased enough to allow almost pain-free walking pressure. This may be a few days to a few weeks, depending on the severity of the injury and the amount of swelling. Those injuries that appear to be unstable by history of multiple previous sprains, or severe degree of swelling, may require an additional two to three weeks in a walking cast for complete healing. After this treatment period, inversion stress x-rays are indicated to rule out any need for surgical intervention. Through the years, the author has arrived at indications for surgery for unstable ankles that seem to be logical and reasonable. In most patients, surgical repair or reconstruction is necessary in a laterally unstable ankle (Fig. 4) if the patient has had three sprain injuries in any six month period of time. This formula, of course, does not apply to people involved in strenuous athletic pursuits. The athlete may require surgery after the only one injury, if he expects to continue the athletic activities. The ankle sprain problem must also be carefully assessed, particularly in young people, from the standpoint of injury to the growing tibial epiphysis. Damage in this area may have occurred at the time of the injury that is not evident on x-ray. Therefore, the clinical assessment is critical. In this area, it is important to be sure that any swelling present is distal to the ankle joint line, therefore indicating ligament injury. If the swelling is proximal to the ankle joint line, an epiphyseal injury must be assumed and the patient treated accordingly. If epiphysis damage is diagnosed, casting treatment for four to six weeks with long-term follow-up is necessary to be sure the patient does not develop abnormal growth.



Figure 2.



Figure 3.

Malleolar Fractures

These represent 30% of the ankle problems, and are the second most common problems encountered (Table II). These fractures need to be discussed from two viewpoints. First, is the fracture undisplaced or displaced, and secondly, how many malleoli are involved. This information, of course, will mostly be gathered from x-ray findings, but the history of the mechanism of injury is also important because reduction and fixation is easier and more secure if rotational components of the injury are considered.

The undisplaced malleolus fracture can often

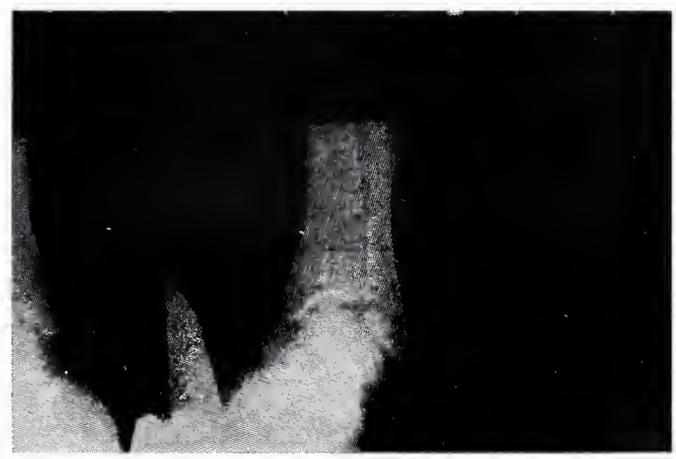


Figure 4.

be treated with casting and non-weight bearing. It is important to be sure from the history of the injury and x-ray appearance of the fracture, that no soft tissues are interposed between the fracture edges. Periosteum or ligament trapped in the fracture can lead to non-union, mal-union and/or instability. Should there be any suspicion from the history, examination, or x-ray findings that this situation exists, then open reduction is indicated. Closed treatment of a severely swollen malleolus fracture, if undisplaced, can be done quite adequately with a bulky, compression bandage of cast padding and an elastic wrap (Fig. 5) and a period of non-weight bearing until decreased swelling and pain will permit application of a snug walking cast. The treatment time will usually be six to eight weeks before unprotected weight bearing can be allowed.

It is important to remember that lateral malleolar fractures, even if they appear undisplaced on x-ray, may be associated with significant ligamentous damage on the medial aspect of the ankle, and this area should be evaluated as already discussed for the possibility of a need for prompt surgical repair.

Those cases in which both malleoli are fractured and displaced, require prompt open reduction and internal skeletal fixation in order to obtain realignment of the fracture fragments for optimal healing, relieve symptoms, and prevent later instability. The surgical treatment should also include an assessment of the ankle joint itself because late difficulties may arise from damage to the ankle joint cartilagenous surfaces that may not be evident on x-ray. An example of this later change can be seen in Figure 6. Even with optimal reduction and internal fixation, post-operative casting is necessary to protect the soft tissues from further swelling and damage, and to allow proper healing of the soft tissue injuries.

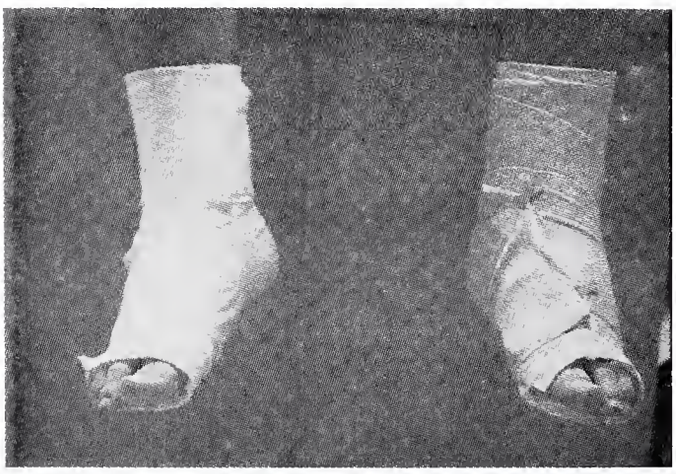


Figure 5.

As previously noted, it is often very important to have both AP, lateral and oblique x-rays of a sprain injury of the ankle in order to assess the possibility of a tibio-talar diastasis. This is a problem that requires prompt surgical treatment because of disability that arises from instability if appropriate measures are not taken early. Unfortunately, I have no x-rays at hand to illustrate this injury, but if there seems to be a gap between the tibia and fibula, particularly on the oblique x-ray, then this injury should be considered.

CONCLUSION

These ankle injury problems have been presented and briefly discussed in an effort to point out certain key areas that should be watched carefully. An effort has also been made to stress the importance of soft tissue injury, in the examination and treatment of the patient. Do not rely solely on x-ray evidence for assessment of an injury. Remembering some of these key points may help us keep our diagnostic suspicion titer sufficiently elevated to allow us to provide better treatment to our patients.

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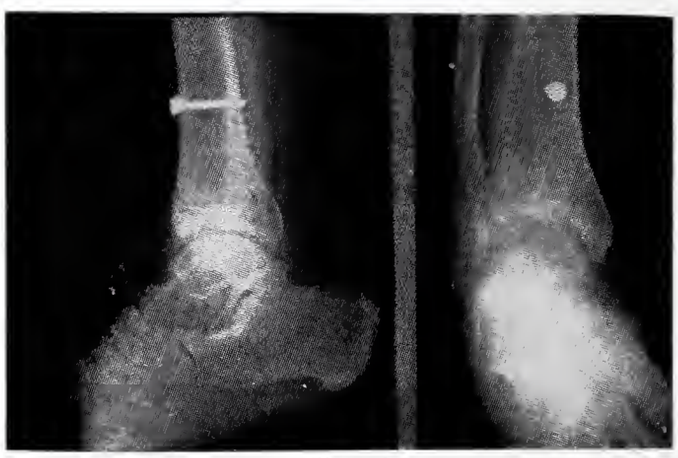


Figure 6.

MEDICAL GRAND ROUNDS

Raynaud's Syndrome

Eleanor A. Lipsmeyer, M.D.*

Case Presentation

A 44-year-old white man had an upper respiratory tract infection with fever, pharyngitis, and generalized arthritis in 1965. He had a left knee effusion and was told he had rheumatoid arthritis. He was placed on aspirin, and his joint pain completely resolved. In 1974 he developed the acute onset of Raynaud's phenomenon while fishing. He was placed on guanethidine; he quit his job with the Forestry Service, and he moved from Oregon to Arkansas. We first saw him in February of 1979. He had smoked two packs of cigarettes per day but stopped smoking, wore gloves in and out of his house, and used an electric blanket. He enjoyed cutting wood outside and working in the yard. He denied other manifestations of scleroderma.

His physical examination showed a BP of 126/50, a normal pulse and respiration. HEENT examination was normal and he could open his mouth quite widely. His chest examination showed high-pitched wheezes; the heart was regular and without murmurs. Extremities showed cyanosis of his fingers and toes and tightening of his skin extending back to the metacarpophalangeal joints. There were healed ulcers, pitting of the fingertips, and periungual capillary telangectasia. He had telangectasia on his face, but no subcutaneous calcifications. His blood count was normal; ESR was 21 mm/hr. BUN, creatinine, and urinalysis were normal. ANA was positive with a speckled pattern at a titer of 1:160. A cine-esophagram showed sluggish motility with slow primary peristalsis throughout the esophagus. Hand films showed early resorption of the tufts with soft tissue calcification and marked loss of soft tissue of the finger pads. We diagnosed CREST syndrome (calcinosis, Raynaud's phenomenon, esophageal dysfunction, sclerodactyly, telangiectasia), and prescribed alpha-methyldopa, 250 mg four times a day. He receives the drug from November 1 until May 1 and has done very well, developing no new fingertip ulcers.

Discussion

Raynaud in 1865 first described local digital asphyxia in which 20 of 25 patients were female, and peak incidence occurred between the ages of 18 and 30. He felt the trigger for this phenomenon was both cold and emotion.[1] Raynaud's syndrome is usually divided into two types: Raynaud's disease which is an idiopathic occurrence and unrelated to any other pathology; and Raynaud's phenomenon which is secondary to some underlying disease with vasospasm or vascular obstruction. Hutchinson stated that associated diseases became manifest within two years of development of Raynaud's phenomenon; but there have been patients who did not develop connective tissue disease until 14 years later. Current criteria for the diagnosis of Raynaud's disease are shown in Table 1.

If Raynaud's disease begins asymmetrically, it becomes symmetrical in 4-6 months. The fingers are usually more affected than the toes. Vasospasm starts in the fingertips and progresses proximally. It usually does not progress to the palms but occasionally the tip of the nose and the ear lobes may be involved. Fingers typically become white as the vessels become vasoconstricted; they become cyanotic or blue as poorly oxygenated blood is present in dilated capillaries. As vasodilation occurs, the fingers become red or hyperemic. The classical color pattern is white, blue, and then red. For diagnosis, however, only a two-phase color change is necessary. In primary Raynaud's disease found in otherwise normal persons, there is normal anatomy of the vessels. Raynaud's phenomenon is usually associated with

TABLE 1
CRITERIA FOR THE DIAGNOSIS OF RAYNAUD'S DISEASE

Episodes of vasospastic color change, excited by cold or emotion
Bilaterality
Normal pulsation in palpable arteries
Absent or minimal gangrene
Absence of causal disease

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collagen vascular disease and marked by anatomic abnormalities of the arteries. Calcinosis circumscripta is a phenomenon of deposition of calcium in the soft tissue usually in the hands or the arms. These deposits are seen on x-ray and may be palpable, and occasionally suppurate and drain. Generally, this form of calcinosis is associated with Raynaud's phenomenon; the mean time of development after onset of Raynaud's phenomenon is 17 years.

Study of the pathophysiology of Raynaud's disease has shown that the normal regulation of vascular flow to the distal extremities is supplied only by adrenergic vasoconstrictive fibers.[1] The remainder of the body is supplied by vasoconstrictive and vasodilative sympathetic fibers. Since the flow to the hands is mediated by alpha adrenergic receptors, alpha stimulation results in vasoconstriction; alpha blockade results in vasodilatation. Theoretically, if this were the only mechanism of vasoconstriction, alpha receptor blockade would completely ameliorate symptoms as would sympathectomy. There appears also to be a local component which is not understood, but is postulated to be a result of prostaglandin or serotonin release.

The diseases that are associated with Raynaud's phenomenon were studied in 100 consecutive patients in one clinic.[2] When divided into those who had Raynaud's disease and Raynaud's phenomenon, only 19 of the 100 had Raynaud's disease. Eighty-one of those patients had associated connective tissue or collagen vascular disease and thus, were thought to have Raynaud's phenomenon. Raynaud's phenomenon is often the first symptom of connective tissue disease. In scleroderma, it is the first symptom in 70% of the patients and in systemic lupus erythematosus, 8-16% of patients present with this symptom. In scleroderma and its subclasses (MCTD, CREST), Raynaud's phenomenon should be present for a diagnosis since up to 90% of patients with scleroderma will have this sign. Table 2 shows the frequency of Raynaud's phenomenon in collagen vascular disease.

Systemic involvement occurring with Raynaud's phenomenon is seen in Table 3.[2] Decreased pulmonary diffusing capacity, measured by DLCO, is present in 23%. Although the patients may be asymptomatic, esophageal hypomotility, measured by loss of peristalsis, is present in 14%. Renal involvement may be present in 6% and is manifest as hypertension and onion-skinning of vessels. The skin abnormalities, such as hidebound skin, and arthralgia are present in one-third of patients. The extent of systemic involvement correlates significantly with severity of Raynaud's phenomenon.

There also appears to be an association of the level of autoantibody formation with severity of systemic disease. Antinuclear antibody (ANA), rheumatoid factor (RF), and LE cell titers were all higher in patients whose disease was more severe, and higher levels of circulating immune complexes were found in patients who had systemic disease. This has led investigators to postulate that the autoantibodies formed in this disease may participate in immune complex formation and thus cause some of the disease manifestations.

A history and physical examination remains the best way to diagnose Raynaud's syndrome. Provocation of an attack with ice water immersion may be done. Hands of normal patients return to normal temperature in 5 to 10 minutes; patients with Raynaud's disease may not have return of normal hand temperature for 30 minutes. Ultrasonic flow detection and digital artery blood pressure may also be measured, but there is no good noninvasive technique for diagnosis. Hand arteriography may be done but is indicated only if a surgically correctable proximal lesion in the vessel is suspected.

Therapy of Raynaud's phenomenon is palliative since there is no cure available. Initially treatment is symptomatic. The mechanism of

TABLE 2
FREQUENCY OF RAYNAUD'S PHENOMENON IN CONNECTIVE TISSUE DISEASE

Disease	*Frequency*
Progressive systemic sclerosis	90%
Systemic lupus erythematosus	20-30%
Polymyositis	30%
Rheumatoid arthritis	<10%
Polyarteritis	Rare
Giant cell arteritis	Rare

TABLE 3
SYSTEMIC INVOLVEMENT ASSOCIATED WITH RAYNAUD'S PHENOMENON

Decreased pulmonary diffusing capacity	23%
Esophageal hypomotility	14%
Renal involvement	6%
Skin involvement	35%
Arthralgia/arthritis	30%

cold-induced vasospasm is explained to the patient; he is instructed to keep his hands and feet warm, and to handle ice or frozen food with tongs. Tobacco smoking has not been specifically implicated in Raynaud's phenomenon, but it does reduce cutaneous blood flow and increases vascular resistance so patients should be encouraged to stop smoking.

Sympathetic blockade or sympathectomy immediately increases digital blood flow five to ten times. By six months, however, blood flow returns to pre-operative levels, supporting the concept that the sympathetic system is not the only regulator of vasospasm. Sympathectomy may be of more help in the lower extremities since patients may obtain symptomatic relief for up to five years. Sympathectomy for Raynaud's phenomenon associated with collagen vascular disease yields very poor results since most of the symptoms are thought to be secondary to vessel thickening and occlusion rather than spasm.

Biofeedback may be helpful in Raynaud's disease but is not useful in Raynaud's phenomenon associated with connective tissue disease.[3] In a study done at the National Institutes of Health, 20 patients were instructed in biofeedback for Raynaud's disease. Nineteen patients were able to normalize response to decreased temperature. Obviously, patient attitude is very important in obtaining good results.

The McIntyre maneuver[4] is the technique used by skiers on the slopes to warm their hands. The patient, while standing, swings the arm briskly at approximately 80 rpm downward behind the body and upward in front of the body. This downward sweep combines gravitational and centrifugal force in moving the blood column into the fingers. This maneuver has been shown to be helpful early in an attack of vasospasm.

Drug therapy is hampered by the unavailability of any agent to specifically dilate vessels of the digits. Reserpine has enjoyed the broadest general success. It is a catecholamine depleting agent which blocks vasoconstrictor response to infused tyramine. Used in a dose of 0.25 to 0.5 mg/day orally for three weeks, it has been shown to increase finger capillary blood flow in Raynaud's disease. Intra-arterial reserpine may be helpful in ulceration or gangrene, but a controlled study showed no advantage over intra-arterial saline injection. Alpha-methyldopa in an oral dose of 1.5 to 2.0 gm/day is claimed to be beneficial through the decarboxylase inhibition of formation of dopamine, a precursor of norepinephrine. Side effects, however, may be orthostatic hypotension, hemolytic anemia, fever, and hepatitis. Guanethidine, a ganglionic blocker, has been used but orthostatic hypotension limits its use. Phenoxybenzamine (Dibenzyline) is an alpha-receptor blocking agent and induces cutaneous vasodilation. It is used in a dose of 20 to 50 mg/day. Some authors previously believed it to be the drug of choice in Raynaud's disease. Prazosin[5] provides a selective postsynaptic alpha-adrenergic blockade, and a minor degree of direct smooth muscle relaxation. Again, its use may be limited by orthostatic hypotension.

The prostaglandins have a new and exciting use in Raynaud's disease. PGE and PGF are recognized as having vasodilator activity. The infusion of PGE1 and PGI2 (prostacyclin), both potent vasodilators and inhibitors of platelet aggregation, was studied in the treatment of peripheral ischemia of the foot.[6,7] Nineteen patients with severe ischemia from various causes were treated by IV infusion of PGE1 or PGI2 for 72-96 hours. Two patients with Raynaud's phenomenon were among the 19 patients. Prolonged pain relief and promotion of tissue healing occurred mainly in patients with patent proximal axial arteries. Patency of the superficial femoral artery was associated with clinical response in 8 of 9 cases. Complete occlusion of the artery was associated with failure of this treatment in 8 of 9 cases. Thus, PGE1 or PGI2, given intravenously may be treatment of choice for severe ischemia in a distal extremity if the major artery to that extremity is patent.

The use of calcium channel blocking drugs is currently being tested. These drugs exert a relative vasodilative effect by their action on smooth muscle. Nifedipine[8] has more effect on peripheral vasculature than verapamil. It decreases arterial resistance but has little effect on venous capacitance. It also produces a decrease in systemic blood pressure. When studied, it was effective in doses of 20 mg tid and produced excellent effects in 7 of 16 patients; good results in 7 of 16 patients; and was ineffective in 2 of 16 patients. One of the patients who failed had idiopathic Raynaud's disease; the other had progressive systemic sclerosis. Diltiazem,[9] another calcium blocking agent, was used in a double-blind manner. The patients were given either placebo or drug and each served

as his own control. All patients appeared to improve significantly while on the drug.

Drugs contraindicated in the Raynaud syndrome include ergot which causes sustained vasospasm. Sporadic cases of peripheral persistent ischemia have occurred with the drug. Bromocryptine is a potent oxytocic agent, and a relatively mild vasoconstricting agent. Raynaud's disease has been reported following use. Methysergide has been found to cause unacceptable peripheral vasospasm occasionally. Drugs which cause blockade of beta adrenergic receptors should also be avoided in Raynaud's syndrome. There appears to be a relatively high incidence of new Raynaud's disease in patients given these drugs for hypertension. Rarely, peripheral gangrene complicates the use of these drugs. One postulate is that the enhanced alpha receptor sensitivity known to occur in the presence of beta receptor blockade is responsible for the increased vasospasm. Conversely, terbutaline, a beta receptor stimulator, has not provided relief for Raynaud's phenomenon as was previously postulated. Bleomycin has been implicated as a cause of Raynaud's phenomenon. It causes a variety of toxic cutaneous effects, some of which resemble scleroderma, and biopsy of affected blood vessels showed thickening of vessel walls.

Vasopressors must be used with caution and care in patients who have Raynaud's syndrome. Generally use of these agents reflects severe hypotension, and extreme measures must be taken. Epinephrine causes both alpha and beta stimulation. Dopamine in small doses has only beta stimulatory activity, but in larger doses has both alpha and beta activity. It stimulates dopamine receptors as well as alpha and beta receptors. Dobutamine is primarily a beta stimulating agent but also has some mild alpha activity. Patients with Raynaud's syndrome should be weaned from these agents as quickly as possible to prevent peripheral ischemia.

Generally, patients with Raynaud's disease fare very well. They rarely develop fingertip ulcers or gangrene. On the other hand, patients with Raynaud's phenomenon may have a more severe course. Patients with progressive systemic sclerosis may develop gangrene secondary to the vascular intimal thickening and proliferation. Vasopressors must be used extremely carefully in this group of patients.

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EDITORIAL

Vascular Disease

Alfred Kahn, Jr., M.D.

There have been important strides in the treatment of vascular disease in the past few decades. One offshoot of this progress is that there are now numerous surgeons who are proficient in vascular surgery. The problems are no longer so much ones of operative technique as in selecting the right cases for surgery—as witness the continuing controversy concerning coronary artery by-pass operations.

One of the puzzling problems to internist and surgeon alike is that of aortic aneurysm. Most of these cases are in an older age group and there is a true dilemma as to whether or not the patient can withstand surgery provided it is necessary. There is a recent review of "Nonruptured Aortic Aneurysms" in *Surgery, Gynecology, and Obstetrics* (page 781, Volume 152, June, 1981) by E. Kessler and H. Gaylis. They reviewed 221 patients who had nonruptured aortic aneurysms. They ranged in age from 51 to 84 years—with most appearing in the 60 to 70 year age group. Of interest is the fact that males outnumbered females five to one. They report that 19 patients were asymptomatic; the remainder had syndromes of pain or pressure. They stated that most of the aneurysms could be palpated and this is an interesting but perhaps controversial point; more and more aneurysms are being reported by radiologists during the course of other abdominal examinations and in reviewing echograms of the abdomen; many of these are undetectable by careful physical examination even with the knowledge of their presence—probably because the "silent" aneurysms are smaller than the symptomatic ones. The authors found aneurysms in other parts of the body in 28 of their patients and they stated that 80 of their patients had occlusive vascular disease in the lower extremities—which they state was "asymptomatic in most patients"; this would appear to be a very high percentage of asymptomatic vascular disease as compared to local experience. The authors operated on these 221 cases with a mortality rate of 6.3%; it should be remembered these cases had nonruptured aortic aneurysms. During an equivalent 15 year period 105 patients with ruptured aortic aneurysms were surgically treated and the mortality rate was 58%. As Kessler and Gaylis point out, abdominal aortic aneurysm can be a lethal disease and, if it is untreated, the life expectancy may be halved. The presence of an abdominal aortic aneurysm is a real danger signal.

"The Natural History of Unruptured Intercranial Aneurysms" is a review of Wiebers, Whisnant, and O'Fallon (New England Journal of Medicine, Volume 304, page 696, March 19, 1981). The authors reviewed a group of 65 patients with unruptured intercranial aneurysms. Because rupture of intercranial aneurysms result in at least a 50% mortality rate, Wiebers et al felt that a better knowledge of the natural history of this disease would be helpful in planning therapy. They studied these aneurysms from a point of view of age, sex, size, location, associated high blood pressure, shape of aneurysm, etc. They found one important factor in determining whether or not an aneurysm might rupture in the future. In their series if the aneurysm was below one centimeter in diameter the increased risk of rupture was appreciable. No aneurysm less than one centimeter in diameter ruptured. Aneurysms eight millimeters or less did not seem to cause symptoms. Those above eight millimeters did cause symptoms. They state that if symptoms develop in an aneurysm that was previously asymptomatic or with minimal symptoms, this suggests the aneurysm is enlarged and increases the probability of a rupture. They further recommend that if the

aneurysm is one centimeter in diameter it be operated on within two and a half months inasmuch as half of the ruptures occur within that period of time.

Vascular disease of the brain has been much better understood since the introduction of reliable techniques for detecting disease of the carotid arteries, the basilar artery, and the smaller branches. Cerebral arteriography is an excellent procedure but has a certain risk and for this reason indirect methods of detecting carotid atherosclerosis have been utilized wherever possible. Bone, Dickinson, and Pomajzl have published a recent article concerning "A Prospective Evaluation of Indirect Methods for Detecting Carotid Atherosclerosis" (*Surgery Gynecology & Obstetrics,* Volume 152, page 587, May, 1981). The authors used three indirect methods of determining carotid atherosclerosis. They studied oculoplethysmography-carotid phonoangiography, periorbital Doppler examination, and supraorbital photoplethysmography. The authors also performed carotid arteriography. The results of the invasive tests were compared to the non-invasive tests. They concluded "oculoplethysmography-carotid phonoangiography, periorbital Doppler examination, and supraorbital photoplethysmography were acceptably sensitive only to carotid artery occlusion and pre-occlusive carotid artery stenosis exceeding a 75% diameter. Less pronounced lesions could not be reliably detected by any of the techniques, either singly or in combination".

Another article dealing with carotid artery disease has been published in the *Journal of the American Medical Association* by Busuttil, Baker, Davidson, and Machleder (Volume 245, page 1438, April 10, 1981). In this study, 215 patients were reviewed. They were individuals who had either a stroke, a transient ischemic attack, or an asymptomatic carotid bruit. The patients were tested with oculopneumoplethysmography. If a significant lesion was determined by this non-invasive test, there was a vast difference in prognosis from those patients who did not have a significant lesion by this non-invasive test. They operated on 40.8% of the cases in whom they deemed there was a significant carotid artery stenosis—51 cases; an endarterectomy was performed. Seventy-four cases of individuals with significant carotid artery stenosis did not have surgery. They reported that the instance of a stroke in the non-operated group was 16% compared to only 1.9% who had an endarterectomy. They further reported that transient ischemic attacks occurred in 39% of the non-operated group as compared to 17% of the operated group. If there were no significant carotid stenotic lesions detected by this indirect method, the risk of cerebro-vascular death disease and stroke was only 2.2%. In their discussion of their experience, Busuttil et al made the following statement "while the number of patients in our study who had asymptomatic carotid bruits was small, our data supplied the observation that only patients with asymptomatic carotid bruits shown to be arising from a hemodynamically significant internal cerebral carotid stenosis require invasive studies and surgical correction". They recommend conservative treatment if the bruit is not associated with a hemodynamically significant stenosis.

Germane to this same topic is an editorial by H. J. M. Barnett on "Prevention of Stroke" (*American Journal of Medicine,* Volume 69, page 803, December, 1980). Barnett states that statistics indicate there is a real decline in number of deaths from stroke during the past 40 years, although the exact cause of this is not really known. The rate of the decline seems to be accelerating. Barnett examined five possible means of preventing strokes. He states that anticoagulant therapy may be valuable, but this has not really been proved. He further feels that carotid endarterectomy may be valuable, but its true worth is not proved. He states that antispasmodic drugs have no proved value. He feels that risk factor management is worthwhile. By this is meant the use of anti-hypertensive programs and treatment for any disorders which might have an adverse effect on vascular circulation. Finally, he briefly reviews the effect of plately anti-aggregant therapy and he states that aspirin was beneficial in men; again, the use of various other platelet anti-aggregant drugs does not seem to have proved benefit. Barnett's conclusions are probably controversial in some respects, but they are certainly very stimulating and worth of careful review by the reader.

"From Other Years"*

Journal of the State Medical Society of Arkansas

Vol. 3 No. 4 Oct. 15, 1892 p. 180-181

The Southwest Arkansas Medical Society held a meeting at Hope on October 4th. The Secretary, Dr. R. M. Wilson, has sent The Journal a full report of the proceedings which will appear in the next number, having been received too late for this issue.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The American Medical Association's seven-year battle against the Federal Trade Commission on the issue of physician advertising ended in a draw before the Supreme Court.

The 4-4 tie vote on the historic case leaves standing a lower court decision upholding the FTC.

The brief "per curiam" order, with Justice Harry Blackmun abstaining from the case, did little to settle the large legal questions raised in the AMA's appeal. Justice Blackmun did not participate, apparently because he had represented medical societies in the past.

As a consequence, the 1980 decision by the U. S. Court of Appeals in New York upholding the FTC's order against the AMA is left standing. The Supreme Court decision said simply: "The judgment is affirmed by an equally divided Court."

"The AMA is disappointed by the Supreme Court decision that failed definitively to resolve the important issues raised by the FTC's attempt to regulate the medical profession," said Joseph F. Boyle, M.D., AMA Board Chairman. "This has been a long drawn-out case stretching over seven years. The AMA had hoped that the Supreme Court would decide the important issues itself. It may now be appropriate for Congress to consider the issues the Court failed to resolve and to clarify the law."

The AMA's appeal to the high court concerned an FTC order relating to the promulgation and enforcement of ethical guidelines in physician advertising and solicitation and physicians' contractual relationship with HMO's and group prepaid plans. A split decision by the U. S. Supreme Court means that no opinion is written, the names of the Justices who voted on either side are not disclosed and the decision of the U. S. Court of Appeals for the Second Circuit (N. Y.) is allowed to stand.

The New York Court's Appeals Panel by a two to one vote in 1980 upheld the FTC's 1979 order barring medical associations from interfering with physicians' attempts to advertise.

The legal issue arose in 1975 when the FTC filed a complaint against the AMA, the Connecticut State Medical Society and the New Haven County Medical Association charging that their principles of ethics forbidding false and misleading advertising were a restraint of trade. Cited by the FTC was a 1975 court decision that for the first time strictly applied the antitrust statutes to professional associations in a case involving the Virginia Bar Association and minimum fees.

The American Dental Association, which supported the AMA's position, was also affected by the Supreme Court decision, since it has agreed to abide by the rules set out by the FTC in the AMA case.

As a result of the high court's tie vote, the original FTC order remains in effect. Under the FTC's order, the AMA can not involve itself in any way with the advertising practices of physicians unless they are clearly false and deceptive.

The position of the AMA has not been that dissemination of fee information and other nondeceptive information which will help enable patients to make an informed choice among competing professionals is ethical, but that misleading promotional practices, described as "solicitation," are unethical.

The Supreme Court heard arguments on the case last January. The AMA urged the justices to rule that the FTC doesn't have the power to interfere with ethical standards propounded for a professional association.

The AMA's warnings to the FTC of the impact of improper advertising on patients went unheeded, said AMA counsel Newton Minnow of Chicago. "Why should the government try to stop guidelines intended to protect and benefit the public?" he asked.

In its appeal to the Supreme Court, the AMA said the case is of "enormous importance" because it allows the government "to prevent professionals who have voluntarily associated together from taking a position against promotional practices which they believe to be deceptive."

The high court's decision had not been expected until July, but when it became clear the Court was deadlocked on the issue, and that there could be no final, definitive opinion, the Justices decided to dispose of the case with the one sentence statement.

The AMA also had argued that the FTC doesn't have the legal authority to move against nonprofessional associations such as the AMA because Congress has carefully limited the agency's jurisdiction to profit organizations.

The AMA advertising case has been regarded as a leading test of the federal antitrust powers in the health field, a burgeoning legal area with scores of cases at the lower court level. Hopes that the Supreme Court would cast definitive legal guidelines and clear up much existing confusion were dashed by the Justices' failure to reach a majority decision.

Legislation has been introduced in the Congress that would weaken the FTC's authority. In the House, 170 representatives are co-sponsoring a bill (H.R. 3722) by Reps. Tom Luken (D-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC actions against state-regulated professional associations or their state and national non-profit associations. A Senate measure (S. 1984) reauthorizing the FTC contains provisions exempting state-regulated professions from the scope of the FTC jurisdiction.

* * * *

A basic restructuring of federal programs is required to solve the nation's health problems, the AMA has told Congress.

Calling for a "new course" setting priorities for the future rather than "quick-fix expediency," the AMA declined to take a position on the Administration's proposed budget cuts for Medicare.

"We believe that addressing individual items in particular programs does not provide the direction and leadership necessary to chart a course for the delivery of health care in this country for this and future decades," said Daniel Cloud, M.D., AMA President.

Accompanied by Fred Rainey, M.D., Chairman of the AMA's Council on Legislation, Dr. Cloud addressed both the House Ways and Means Health Subcommittee and the Senate Finance Committee in March on hearings concerned with Administration proposals to reduce Medicare/Medicaid expenditures. The two committees are charged with preparing estimates for the first budget resolution due in May.

Here are excerpts from the testimony of the two AMA spokesmen:

"... It is now time to step back from the pattern of looking at individual program budgets and attempt to place in perspective the role of the federal government in financing and delivering medical services in the future. Now is the time to set priorities for the future and not continue to deal with crises on an annual basis."

Outlining to the lawmakers the sweeping new AMA policy, the spokesmen said the AMA intends to take the initiative to evaluate long-term health policies that will provide a proper case for our citizens within the available national resources. "The AMA will hand down recommendations on both long-term and short-term health care problems.

"... There should be no sacred programs—a primary goal should be meeting the needs through governmental resources of those not able to provide for themselves."

"... The answers to our health problems are not to be found in arbitrary caps, in inequitable benefit reductions, in arbitrary cost shifting or in quick fix expediency — solutions will be found only when all interested parties participate in a basic restructuring of federal programs.

". . . A first step might be to place health matters within a distinct Department of Health, both at the federal and state levels—health care is too important to be placed within a cabinet department that has a major share of its activity devoted to welfare.

". . . The AMA is committed to an economy characterized by strong, real growth and reaching this goal is necessary to ensure a quality living standard for everyone," the AMA witnesses said.

Some 20 health related and insurance organizations appeared before the House and Senate committees, each limited to a five minute oral presentation. Most of the witnesses and a number of representatives and senators were hostile to the Administration's proposal for a flat two percent across-the-board cut in Medicare hospital reimbursement.

* * * *

The federal health planning program is a classic example of the pitfalls encountered in a federal regulatory approach to dealing with local problems, the AMA has told Congress.

The program has failed and should be wiped from the statute books, said Fred Rainey, M.D., Chairman of the AMA's Council on Legislation. Dr. Rainey told the House Commerce Subcommittee on Health that not only should funding be terminated but the law must be repealed. Otherwise, he noted, states would have to continue Certificate-of-Need (CON) programs or face federal sanctions including the cutting-off of public health funds.

Planning has been unpopular and controversial from the start seven years ago, Dr. Rainey said. The program overrides the special needs and circumstances of states and localities, imposes a network of bureaucratic entities, carries excessive and expensive paperwork requirements, and shifts policies and directions so frequently "that those who want to comply with the law are continually uncertain of their opportunities and obligations," the AMA official testified.

The subcommittee, headed by Rep. Henry Waxman (D-CA), is considering the Administration's proposal to terminate funding for planning and counter-proposals to keep planning alive.

Dr. Rainey said that as planning evolved over the years, federal officials became less concerned with the original goal of "access to quality care," and more concerned with cost reduction. However, the program has also failed in this regard, he said. There is evidence that the certificate-of-need process actually adds to health care costs "because of the expense of preparing CON applications and appealing negative CON decisions and the greater costs of construction resulting from delays in the CON process," he said.

Another AMA witness, Lonnie Bristow, M.D., a member of the AMA Council on Medical Service, said new voluntary health planning initiatives are emerging that "are inteuded to address community needs and are supported by the community."

Dr. Bristow said more than 70 coalitions involving business, labor, medicine, institutions and insurance carriers are now operating. Their activities embrace various elements of health planning.

New initiatives are occurring voluntarily across the nation. "As federal involvement in health planning diminishes, we believe these positive efforts will gain greater momentum," Dr. Bristow told the subcommittee.

"When these initiatives are encouraged, there will be increased efficiency with greater emphasis on the prevention, early intervention and treatment of chronic health problems which will result in more cost-effective health delivery programs," the AMA spokesman said.

Rep. Waxman opened the hearing with a plea for continuation of the planning program, contending that it has restrained the growth of health spending. Among organizations supporting the program were the American Health Planning Association, the Hospital Association of New York State, and the American College of Physicians.

Rep. Richard Shelby (D-AL), a subcommittee member, has introduced legislation to phase out the program. He said the crackdown by planners on CAT scanners "is a classic case of the pitfalls of federal regulation" and the "planners were proved wrong."

Rep. Edward Madigan (R-IL) is drafting a bill that would keep planning alive with reduced funds and with less federal regulation.

* * * *

The Administration's proposal to deny medical students' participation in the Guaranteed Student Loan (GSL) program "will have a drastic effect upon the future financing of medical education," the AMA has told Congress.

Elimination of the loan program would remove about $190 million in aid that was used by more than 40,000 medical students during the last

academic year, the AMA said in a statement to the House Appropriations Subcommittee on Health.

"Access to medical education must not be allowed to become limited on the basis of individual family income," wrote James Sammons, M.D., AMA Executive Vice President. "We are very concerned that limiting GSL availability to only undergraduate students would be a most significant step toward limiting access to a medical education," said Dr. Sammons.

The loan program accounts for almost one-half the total amount of financial aid available to medical students, the AMA noted.

With other sources of student aid shrinking, "we are very concerned that the additional elimination of $190 million in GSL program funds at a time when the availability of loan funds at any interest rate are being constricted will leave many qualified medical students facing increasing educational costs with no avenue for financial assistance," said the AMA.

Dr. Sammons concluded:

"The future health of this nation is largely dependent upon our medical schools being able to attract the most qualified students. Elimination of GSL program participation by medical students could cause some of these students to alter their career choices. We strongly urge the committee to reject the proposal that will eliminate this vital source of financial aid to so many students."

* * * *

The AMA has backed more explicit health warnings on cigarette packages and in advertisements.

In a statement to the House Commerce Subcommittee on Health, the AMA also said the effectiveness of rotating health warning labels should be evaluated after a time for effectiveness.

The AMA also told the House Subcommittee that it is developing an audiovisual presentation on how to quit smoking that will soon be available for physicians to use in assisting patients who wish to quit smoking.

* * * *

Declaring that the Clean Air Act has done much to improve the overall quality of our air, the AMA has urged Congress to reauthorize the program.

"While it is clear that progress is being made nationally to improve air quality, the need remains for a sustained program to provide for continued efforts," the AMA said in a statement to the Senate Public Works Committee. "We strongly support a continuation of the Act. . . . Our primary concern remains the effect of the legislation on public health."

Discussing specific provisions, the AMA said provisions in existing law requiring standards "allowing an adequate margin for safety" should be retained. Extensions or waivers for areas that cannot comply with the national primary ambient air quality standards by the end of the year should be sparingly granted on a case-by-case basis, according to the AMA.

Current sanctions such as withholding of highway funds and sewage treatment grants are "inappropriate" and should be eliminated, the AMA said.

Strict restrictions on new emission sources are required, and there should be continued protection of pristine areas from significant air quality deterioration by requiring strict, but reasonable, emission limitations for new sources, the AMA stated.

The AMA said it "cannot, at this time, support relaxing of emission standards for motor vehicles. If appropriate peer-reviewed scientific data demonstrate that the limitations are not required to protect the public health we could endorse relaxations."

* * * *

President Reagan has not made a final decision on the shape of the pro-competition national health plan due to be presented Congress soon, according to Health and Human Services Secretary Richard Schweiker.

Schweiker questioned the accuracy of a published report (the New York Times) that said the Administration had abandoned major elements of the competition plan, including placing a ceiling on the amount of private health insurance premium costs that businesses can deduct. However, the HHS official, addressing a group of reporters at a luncheon of the Washington Journalism Center, did not flatly deny the news story.

Changes have been made and will be made in the plan until the President makes the final sign-off, said Schweiker.

* * * *

As much as one half of all the processed foods regulated by the Food and Drug Administration

(FDA) will have sodium labeling by year's end as a result of the voluntary campaign by the FDA, health educators and the food industry.

Arthur Hull Hayes, M.D., FDA Commissioner, told the AMA Conference on Sodium Labeling that some of the nation's leading manufacturers have made labeling commitments. These include General Foods, Del Monte, Procter and Gamble, Frito-Lay, General Mills, Best Foods, Quaker Oats and Campbell Soup Company.

"We've come a long way in the past eleven months," said Dr. Hayes, "but we would be deluding ourselves if we thought that this program is anything but a beginning."

The FDA chief said that by sponsoring the Washington conference, the AMA "has again demonstrated its leadership role in encouraging the availability of more information about sodium." He noted the AMA has been actively engaged in addressing public health concerns involving sodium, salt and hypertension, including a symposium in 1978.

The FDA currently is developing proposed regulations that would require that sodium be part of the standard nutrition label. A mandatory requirement for labeling is a possibility, but Dr. Hayes said that will be decided later after receiving comments from participants in conferences such as the AMA meeting and after assessing the results of the voluntary program.

"We would consider legislation to mandate virtually universal sodium labeling only if the voluntary efforts on the part of the food industry to effect sodium reduction and more sodium labeling fail."

Lowell Steen, M.D., immediate past chairman of the AMA Board of Trustees and chairman of the conference, said that maintaining moderate dietary sodium restrictions is difficult without labeling information. "A cost-effective system of sodium labeling would be beneficial to both patients and their physicians and thus be of considerable assistance in the medical management of hypertension as well as other disorders where restriction of sodium may be required," Dr. Steen told the audience of physicians, federal officials, food industry representatives, dietitians, etc.

* * * *

Reports that the Administration might relax health and safety rules for nursing homes were scotched by Health and Human Services Secretary Richard Schweiker.

"I will not turn back the clock," said Schweiker in a statement. "I will not imperil senior citizens in nursing homes, our most vulnerable population, by removing essential federal protections."

Among other provisions, current rules provide staffing levels for medical directors, a provision that the AMA had urged be retained for nursing homes. Various other health and safety regulations cover fire safety, patient privacy and dignity, infection control, etc.

The eight-year-old rules set standards for 18,000 nursing homes that receive Medicare and Medicaid payments.

* * * *

Medical organizations have renewed their attack on the Administration plan to notify parents of teen-age girls who receive prescription contraceptives from federally-funded clinics.

George Ryan, M.D., President of the American College of Obstetricians and Gynecologists, told a news conference in Washington, D. C., that "pregnancy is the price that many will pay." Dr. Ryan said the plan "makes no sense on the grounds of health."

Young women face a five times greater chance of serious disease and death from pregnancy than from birth control pills or intra-uterine devices, according to the physician.

Speaking on behalf of eight organizations, including the AMA, Dr. Ryan said many teen-agers will not seek birth control services if their parents must be notified. The regulation would discriminate against poor youth because those with money could receive confidential help from private physicians, he said.

The Administration proposal would require notification of parents within 10 days after girls under 18 get birth control devices or pills at clinics funded by the federal government. The Administration position is that parents have a right to be told of decisions which have "long-term health consequences for the adolescent."

Dr. Ryan said as many as 100,000 pregnancies might result from the Administration plan.



keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

BLOOD COMPONENT THERAPY

Presented by Ernest Simon, M. D., Medical Director, United Blood Services, Scottsdale, Arizona, *July 6, 12:00 noon,* St. Joseph's Regional Health Center, Hot Springs. One hour Category I credit. No registration fee.

MULTIPLE RISK INTERVENTION TRIALS

Presented by Jerome Cohen, M.D., *July 6, 7:30 p.m. to 9:30 p.m.,* CPR Room, St. Edward Mercy Medical Center, Fort Smith. Sponsored by AHEC-Fort Smith. Two hours Category I credit. No registration fee.

FELDENE — NEW ARTHRITIC DRUG

Presented by David K. Lee, M.D., *July 20, 7:00 a.m. Breakfast Meeting,* Doctors' Dining Room, St. Edward Mercy Medical Center, Fort Smith. Sponsored by AHEC-Fort Smith. One hour Category I credit. No registration fee. Reservations required for meal.

THYROID FUNCTION AND DISEASE IN THE ELDERLY

Presented by Manfred Blum, M.D., Professor of Medicine, Director of Nuclear Endocrine Laboratory, New York University Medical Center, New York, *July 20, 7:00 p.m.,* In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

MANAGEMENT OF MENOPAUSE

Presented by Jay Schinfeld, M.D., Department of Obstetrics and Gynecology, University of Tennessee College of Health Sciences, *July 27, 6:30 p.m.,* Colonial Steakhouse, Fifth and Beech Street, Pine Bluff. One hour Category I credit. Accredited by AHEC Pine Bluff. No registration fee.

ANNUAL SCIENTIFIC ASSEMBLY OF THE ARKANSAS ACADEMY OF FAMILY PHYSICIANS

Presented by Lee B. Parker, M.D., *July 29, 1:30 p.m. to 5:00 p.m.; July 30, 8:30 a.m. to 5:00 p.m.; July 31, 8:30 a.m. to 12:00 noon.* Little Rock Convention Center. Sponsored by UAMS. Twelve hours Category I credit. Registration fees: Residents $5.00; Members $50.00; Non-members $60.00.

TOTAL JOINT REPLACEMENT

Presented by Robert Kleinhenz, M.D. Orthopaedic Surgeon, *August 3, 12:00 noon,* Conference Room, St. Joseph's Regional Health Center, Hot Springs. One hour Category I credit. No registration fee.

EVALUATION OF THE PATIENT WITH LUNG DISEASE

Presented by Roger C. Bone, M.D., Professor of Medicine, Chief of Pulmonary Division, UAMS, *August 17, 7:00 p.m.,* In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category 1 credit.

EL DORADO — AHEC-SOUTH

Surgical Conference, each Monday, 12:45 p.m. to 1:30 p.m.
Medical Journal Club Conference, first and third Tuesday, 12:45 p.m. to 1:30 p.m.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m.
Internal Medicine Conference, first and second Wednesday, 12:45 p.m. to 1:30 p.m.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Neurology Conference, fourth Wednesday, 12:45 p.m. to 1:30 p.m.
Obstetrics-Gynecology Conference, each Thursday, 12:45 p.m. to 1:30 p.m.
Pediatric Conference, third and fourth Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas on fourth Friday; Union Medical Center on third Friday.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, first and third Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Radiology Conference, July 1, 15 and August 5, 19, 1:00 p.m., Conference Room.
Pathology Conference, July 20 and August 17, 3:00 p.m., Conference Room.
Mortality Conference, July 8 and August 12, 3:00 p.m., Conference Room.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

FORT SMITH – AHEC
Cancer Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO – AHEC-NORTHEAST
Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., St. Bernard's Dietary Conference Room.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK – ARKANSAS CHILDREN'S HOSPITAL
Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physician's Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physician's Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physician's Conference Room.
Primary Care Seminar, second and fourth Thursday, 5:00 p.m., Second Floor Conference Room, Pediatric Administrative Building.

LITTLE ROCK – BAPTIST MEDICAL CENTER
Cardiopulmonary Resuscitation Course, July 14 and August 11, 7:00 p.m. to 1:00 a.m., Auditorium, Six hours Category I credit.
GI Roundup, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Emergency Medicine Conference, first Wednesday, 12:30 p.m., to 1:30 p.m., Conference Room #1.
Coronary Conference, second Wednesday, 5:00 p.m. to 6:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, each Thursday except first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Dining Room #3.
Case of the Month, July 14 and August 11, 12:00 noon to 1:00 p.m., Conference Room #1.
Anxiety/Stress Conference, fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Radiology Conference, each Wednesday, 4:30 p.m. to 5:30 p.m., Radiology Department.

LITTLE ROCK – ST. VINCENT INFIRMARY
Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E 159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.

LITTLE ROCK – UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA – AHEC SOUTHWEST
AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.

THINGS TO COME

September 13-16

1982 Annual Meeting United States Section International College of Surgeons. "International Surgical Frontiers." Resorts International Hotel, Atlantic City, New Jersey. For further information, contact: Mrs. Sally Cox, Coordinator of Continuing Medical Education, 1516 North Lake Shore Drive, Chicago, Illinois 60610.

March 5-12, 1983

Canadian - American - Medical - Dental - Association. Twenty-second annual meeting at The Lodge, Vail, Colorado. For further information on the professional program, social functions or spouses participation program, contact Dr. H. Robert Allott, CAMDA secretary, at Box 116, Sault Ste. Marie, Michigan 49783.



PERSONAL AND NEWS ITEMS

DRS. HAYNES AND FLIPPIN SPEAK

Drs. W. Ducote Haynes and Tony Flippin of Little Rock are members of a traveling tumor team sponsored by the Professional Education Committee of the American Cancer Society. They recently spoke to the staff of Boone County Hospital on new innovations in cancer treatment.

DR. PYE LOCATES

Dr. Ted Pye, formerly of Uvalde, Texas, has opened an office at Howard County Memorial Hospital in Nashville.

DR. TURNEY HONORED

Dr. L. R. Turney of McGehee was honored by the Governor's Office of Voluntary Citizen's Participation in appreciation of his service as call physician for the Bloodmobile visits to McGehee.

DR. WADE SCORES ACES

Dr. H. King Wade, Jr., of Hot Springs shot a hole-in-one twice in the same day recently at the Hot Springs Country Club. Dr. Wade had played golf over fifty years without scoring an ace.

DR. BASKERVILLE IS SPEAKER

Dr. Jerry Baskerville of Paris recently spoke on medical emergencies at a meeting of the North Logan Memorial Hospital Auxiliary.

PHYSICIAN SPEAKERS

Drs. Robert Vogel, Robert Lehmberg and Raymond Wende of Little Rock made presentations on the general care of burn victims at the spring meeting of the Arkansas Chapter of the American Physical Therapy Association.

DR. RAYMOND MILLER RECEIVES AWARD

Dr. Raymond P. Miller, Sr., of Little Rock was awarded the 1982 Distinguished Service Award by the Association of Governing Boards of Universities and Colleges for his extraordinary qualities of leadership and dedication in serving their institutions and American Higher education.

DR. REESE INVESTED

Dr. William G. Reese of Little Rock has been invested as the first "Marie Wilson Howells Professor and Chairman of Psychiatry." Dr. Reese has been Chairman and Professor of Psychiatry Behavior Sciences at the University of Arkansas College of Medicine for 31 years.

Dr. Harry Ward, Chancellor at the College of Medicine, presided at the ceremony honoring Dr. Reese.

DR. JANSEN HONORED

Dr. G. Thomas Jansen of Little Rock was honored at an alumni dinner for former Dermatology residents of the University of Arkansas College of Medicine. Each year, Dr. Jansen and his wife host a dinner for the alumni of the program during the Arkansas Dermatologic Society meeting. This year, because Dr. Jansen has announced his retirement as Chairman of the Dermatology Department, former residents honored him.

Dr. Jansen received a watch and plaque and a check to be used in the establishment of the G. Thomas Jansen Fund at the University of Arkansas for Medical Sciences.

DRS. CLOPTON AND MACKEY FEATURED

Drs. O. H. Clopton and Michael Mackey of Jonesboro were featured on a local television program on blood pressure control.

DR. TRANUM SPEAKS

Dr. Bill Tranum of Little Rock spoke at a recent meeting of the Little Rock Rotary Club on "Social Factors in Health."

DRS. BELL AND BALDWIN

Drs. James P. Bell and Michael Baldwin of Mena participated in the Licensed Practical Nursing class at Rich Mountain Vo-Tech. Dr. Bell spoke on Cardio-Vascular Disease and Dr. Baldwin discussed Muscular-Skeletal Disorders.

DR. CROW ELECTED

Dr. Neil Crow of Fort Smith has been elected to the Board of Trustees of Sparks Regional Medical Center.

DR. BISHOP

Dr. Robert Bishop of Morrilton has moved his office to Highway 9B North — across from the Riverland Shopping Center.

DR. ROBERT MILLER

Dr. Robert Miller of Helena was honored at a recent meeting of the Arkansas Chapter of Black Social Workers, Phillips County Unit, for his work in medicine.

ORTHOPAEDIC OFFICERS

Dr. James F. Moore of Fayetteville is the new president of the Arkansas Orthopaedic Society.

Dr. James Buie of Fort Smith was elected secretary-treasurer.

CANCER SYMPOSIUM

Drs. Bill Tranum, Kent Westbrook, W. Ducote Haynes and Nicholas P. Lang participated in a recent Cancer Symposium in Little Rock.

DR. NORTON

Dr. George Norton of Little Rock has been named to the Board of Directors of the Pulaski County Chapter of the American Heart Association.

ASIM ELECTION

Dr. Monroe B. Painter of Fayetteville, president of the Arkansas Society of Internal Medicine, has announced that Dr. Jerry Stewart of Fort Smith has been elected president-elect of ASIM and Dr. Jack Blackshear of Little Rock has been elected secretary-treasurer. Others elected to serve on the executive committee are: Drs. Charles Wilkins of Russellville, James Rasch of Little Rock and John Crenshaw of Pine Bluff.

AUXILIARY HONORS PHYSICIANS

The Jefferson County Medical Auxiliary honored three retired physicians, Drs. Charles W. Anderson, John T. Herron and Howard S. Stern, all of Pine Bluff, in observance of Doctors' Day.

BOOKS DONATED

The Jackson County Medical Society donated four books to the W. A. Billingsley Memorial Library in observance of Doctors' Day. The books were accepted for the Library by Dr. John D. Ashley.

PATHOLOGY OFFICERS

Dr. Aubrey J. Hough, Jr., of Little Rock is the new Chairman of the Board of the Arkansas Academy of Pathology. Other officers elected are: Dr. Albert E. Kalderon of Little Rock as president, Dr. Gary Markland of Little Rock as first vice president, Dr. Rodney Roe of Little Rock as second vice president, Dr. Don Scott of Little Rock as third vice president, Dr. Charles Sullivan of Little Rock as secretary-treasurer and Dr. James F. Clark, Jr., of Pine Bluff as member-at-large.

DR. PUPSTA AND DR. STONE

Dr. Benedict Pupsta of Clarendon and Dr. Herd Stone of Holly Grove were visited by the local Nursery Class on Doctor Appreciation Day.

FORT SMITH PHYSICIANS IN SPORTS MEDICINE CLINIC

Fort Smith physicians, Drs. Albert MacDade, Peter Irwin, James Long and Marvin Mumme spoke at a sports medicine clinic for coaches in the Western Arkansas and Eastern Oklahoma area.

Special guest speakers were Dr. J. Pat Evans, orthopaedic consultant for the Dallas Cowboys, Larry Gardner, former trainer of the Cowboys and Miami Dolphins, and Dr. Robert Vandermeer, orthopaedic surgeon for the Southern Methodist University (SMU) Mustangs.

DR. WILSON ELECTED

Dr. Steve Wilson of Fort Smith is the newly-elected Arkansas Representative to the Executive Committee of the South Central Section of the American Urologic Society.

OBITUARY

DR. J. NEAL LANEY

Dr. Laney of Forrest City died April 19th, 1982. He was born March 26, 1925, at Three Creeks.

Dr. Laney served with the United States Air Force as a pilot during World War II. He graduated from the University of Arkansas College of Medicine in 1957 and moved to Forrest City to begin practice in 1959.

Dr. Laney is survived by his wife, Coy Lee, three sons and one daughter.

DR. FINIS Q. WYATT

Dr. Wyatt of Batesville died April 27, 1982. He was born April 30, 1906, in Rosie.

Dr. Wyatt received an A.B. degree from Ouachita College in Arkadelphia in 1931. He was a 1936 graduate of the University of Arkansas College of Medicine. Dr. Wyatt began practicing medicine in Batesville in 1938. He organzied the North Arkansas Clinic, was responsible for purchasing the land for the White River Medical Center building and was first chief of staff of the Center.

Dr. Wyatt was a veteran of World War II. He was a Fellow of the International College of Surgeons and a Diplomat of the International College of Surgeons-Obstetrics-Gynecology.

Dr. Wyatt is survived by two brothers.



NEW MEMBERS

DR. RICHARD KNIGHT

Dr. Knight is a new member of the Benton County Medical Society. He was born in Memphis, Tennessee.

Dr. Knight was graduated from the University of Arkansas at Fayetteville in 1974 with a B.A. in Zoology. He is a 1978 graduate of the University of Arkansas College of Medicine. Dr. Knight completed a Pediatric residency at Children's Hospital.

Dr. Knight specializes in Pediatrics. His office is located at 1114 Poplar Place in Rogers.

DR. VICTOR A. ROZEBOOM

Dr. Rozeboom, a new member of the Boone County Medical Society, was born in Sioux City, Iowa.

Dr. Rozeboom received a B.G.S. degree from the University of Iowa. He was graduated from the University of Iowa College of Medicine in Iowa City in 1976. His internship and residency were with the University of Missouri Medical Center in Columbia. He moved to Harrison in 1980.

Dr. Rozeboom is a board certified Radiologist. His office is located at 707 North Vine Street in Harrison.

DR. KONG HUA LIM GO

Dr. Go is a new member of the Desha County Medical Society. He is a native of The Philippine Islands.

Dr. Go was graduated from the Institute of Medicine Far Eastern University, Manila, in 1973. He served his internship and residency at the Cumberland Medical Center in Brooklyn from 1977 to 1981.

Dr. Go specializes in Surgery. His office is in the Southeast Arkansas Medical Center, Highway 65 South, in Dumas.

DR. RAY W. LEAVELLE

Dr. Leavelle, a native of Texarkana, is a new member of the Miller County Medical Society.

Dr. Leavelle was graduated from the Southern State University in Magnolia in 1966. He is a 1970 graduate of the University of Arkansas College of Medicine. He served his internship at Baptist Hospital in Little Rock. From 1971 to 1974, Dr Leavelle served a residency at the University Medical Center.

From 1974 to 1976, Dr. Leavelle was a member of the United States Air Force. He practiced in Nashville for five years and has been in Texarkana for two years.

Dr. Leavelle specializes in Radiology. His office is located at 3300 Rhozine in Texarkana.

* * * *

The Mississippi County Medical Society has three new members:

DR. LAWRENCE J. ABRAMSON

Dr. Abramson, a native of Dallas, Texas, received a B.A. degree in 1971 from the University of Texas at Austin. He was graduated from the University of Texas Medical Branch at Galveston in 1975.

Dr. Abramson served a rotating internship and Dermatology residency at the National Naval Medical Center in Bethesda, Maryland.

Dr. Abramson was Chief of Dermatology Service at the United States Naval Regional Medical Center in Millington, Tennessee. He was discharged from the Navy in 1981. He moved to Blytheville in 1980. Dr. Abramson is a Clinical Instructor with the Department of Dermatology at the University of Tennessee Center for the Health Sciences in Millington.

Dr. Abramson is board certified in Dermatology. His office is located at 10th and Highland in Blytheville.

DR. HARVEY C. HARMON

Dr. Harmon was born in San Antonio, Texas. His pre-med education was at the University of Hawaii in Honolulu. In 1971 Dr. Harmon was graduated from the University of Tennessee College of Medicine in Memphis.

After an internship with Barroness Erlanger Hospital in Chattanooga, Tennessee, Dr. Harmon served a residency with the University of Tennessee Affiliated Hospitals in Memphis. Before moving to Blytheville, he practiced for five years in Memphis and was an Assistant Professor of Surgery with the University of Tennessee College of Medicine from 1976 to 1981.

Dr. Harmon is a board certified Surgeon. He specializes in General Surgery. His office is located at 10th and Highland in Blytheville.

DR. C. G. MELTON

Dr. Melton was born in Searcy and attended Hendrix College in Conway. He received his medical degree from the University of Arkansas

College of Medicine in 1977.

Dr. Melton served his internship and completed residency training at Tulane University, Charity Hospital of Louisiana in New Orleans. From 1980 to 1981, he was Chief Resident of Obstetrics and Gynecology.

Dr. Melton moved to Blytheville in 1981. His office for the practice of Obstetrics and Gynecology is at 10th and Highland, Suite B.

DR. MICHAEL H. BALDWIN

Dr. Baldwin received a B.S. degree in 1965 from Clemson University, South Carolina, and his M.D. degree in 1969 from the Medical University of South Carolina College of Medicine, Charleston.

Dr. Baldwin did his internship and Orthopaedic residency with the Greenville Hospital System in South Carolina. Dr. Baldwin was a member of the United States Army from 1974 to 1977 and a member of the Madigan Army Medical Staff from 1975 to 1977. From 1979 to 1981, he served a Diagnostic Radiology residency at the University of New Mexico Affiliated Hospitals in Albuquerque.

Dr. Baldwin is board certified in Orthopaedics and Diagnostic Radiology.

Dr. Baldwin specializes in Diagnostic Radiology. His office is located in the Wilhemina Medical Center in Mena.

* * * *

The Pulaski County Medical Society has four new members:

DR. RENIE E. BRESSINCK

Dr. Bressinck is a native of Little Rock. He is a 1966 graduate of the University of Arkansas at Little Rock and a 1970 graduate of the University of Arkansas College of Medicine.

After an internship at St. John's Hospital in Tulsa, Dr. Bressinck had Internal Medicine residency training at the Internal Medicine Foundation in Tulsa. From 1973 to 1975, he was in a Dermatology residency with the University of Arkansas College of Medicine. He is board certified in Dermatology.

Dr. Bressinck specializes in Dermatology. His office is in Suite 950 of the Medical Towers Building in Little Rock.

DR. A. S. FITZHUGH

Dr. Fitzhugh was born in Augusta. He served with the United States Navy from 1942 to 1945 and from 1951 to 1953.

Dr. Fitzhugh received his pre-medical education at Glendale Junior College, California, and the University of North Carolina at Chapel Hill. He is a 1948 graduate of the University of Arkansas College of Medicine.

Dr. Fitzhugh served a rotating internship and Pathology residency at the University of Arkansas College of Medicine. He served a residency in Pediatrics at Duke University Medical Center, North Carolina. He is board certified in Pediatrics.

From 1953 to 1968, Dr. Fitzhugh practiced in Griffin, Georgia. He spent two years in Viet Nam working for the American Medical Association. From 1970 to 1973, Dr. Fitzhugh was an Associate Professor of Pediatrics at the University of Arkansas College of Medicine; he joined the Arkansas State Health Department in 1974.

Dr. Fitzhugh is Deputy Director of the State Health Department.

DR. SAM L. SHULTZ

Dr. Shultz was born in Ardmore, Oklahoma. He received an A.S. degree from the Cooke County Junior College, Gainesville, Texas, in 1964 and a B.S. degree from Baylor University, Waco, Texas, in 1966. Dr. Shultz was graduated from the University of Texas Medical Branch at Galveston in 1970.

After a Pediatric internship with the University of Kansas Medical Center in Kansas City, Dr. Shultz was a staff pediatrician for the United States Navy from 1971 to 1975. He was a Pediatric resident at the University of Arkansas College of Medicine from 1975 to 1977. Dr. Shultz is board certified in Pediatrics.

Dr. Shultz is the Director of Child Health Services with the Arkansas Health Department at 4815 West Markham in Little Rock.

DR. G. RICHARD WESTERMAN

Dr. Westerman, a native of Chicago, Illinois, is a graduate of the Cleveland Institute of Music, Ohio. He received a Bachelor of Music degree in 1967 and a Master of Music degree in 1970. He was graduated from the Case Western Reserve University School of Medicine in Cleveland, Ohio, in 1975.

Dr. Westerman served his internship and a General Surgery residency at Peter Bent Brigham Hospital in Boston, Massachusetts. He also served a Cardiothoracic Surgery residency at Brigham Hospital and the Children's Hospital Medical Center in Boston. He is certified by the American Board of Surgery.

Dr. Westerman specializes in Cardiothoracic

Surgery. He is affiliated with the University of Arkansas College of Medicine at 4301 West Markham in Little Rock.

DR. S. A. AHMED

Dr. Ahmed is a new member of the Scott County Medical Society. He is a native of Baoni State, India.

Dr. Ahmed is a graduate of St. Patrick's College in Karachi, Pakistan. He was graduated from the Dacca Medical College, Dacca, Bangladesh. His internship was with the Catholic Medical Center in Jamaica, New York. Dr. Ahmed served his residency with Dr. I. Enquist at Methodist Hospital in Brooklyn, New York. He served as Chief Resident at Methodist Hospital.

Dr. Ahmed specializes in General Surgery. He has practiced in Waldron since September 1979. His mailing address is Post Office Box 547, Waldron 72958.

DR. BOB G. MITCHELL

Dr. Mitchell is a new member of the Sebastian County Medical Society. He is a native of Fort Smith.

Dr. Mitchell received his pre-med education at Northeastern State College in Tahlequah, Oklahoma, and the Oklahoma State University at Stillwater. He was graduated from the University of Oklahoma College of Medicine, Oklahoma City, in 1956. His internship was with St. Anthony Hospital in Oklahoma City.

Dr. Mitchell practiced in Sallisaw, Oklahoma, for twenty years.

Dr. Mitchell specializes in General Practice and Home Health Care. His office is located at 1103 Lexington in Fort Smith.

DR. WALTER M. BOND

Dr. Bond, a new member of the Washington County Medical Society, was born in Oregon City, Oregon. He attended State Teachers College in Bloomsburg, Pennsylvania, from 1931 to 1933. He received a B.S. degree from the Pennsylvania State College in 1936. Dr. Bond was graduated from the University of Pennsylvania School of Medicine in Philadelphia in 1940.

Dr. Bond served his internship with the Philadelphia General Hospital in Pennsylvania. From 1949 to 1953, he trained with the School of Tropical Medicine in San Juan, Puerto Rico, and was an Instructor in Pathology at the University of Puerto Rico, San Juan. He was with the Scott and White Hospital in Temple, Texas, from 1953 to 1954.

From 1955 to 1971, Dr. Bond practiced with The Wanless Hospital, Miraj, Maharashtra, India. He was in training with the Case Western Reserve University School of Medicine in Cleveland, Ohio, from 1960 to 1961 and with the Cleveland Clinic, Ohio, from 1966 to 1967. Dr. Bond was a Lecturer in Pathology with the Miraj Medical College, Miraj, India, from 1963 to 1971. He was associated with the Shanta Bhawan Hospital, Kathmandu, Nepal, from 1971 to 1980.

Dr. Bond is board certified in Pathology. His office, for the practice of Pathology, is located at 2470 Gregg Avenue, Fayetteville.

DR. PERRY F. CRAWFORD

Dr. Crawford is another new member of the Washington County Medical Society. He was born in Drumright, Oklahoma.

Dr. Crawford attended the University of Oklahoma and was graduated from the University of Oklahoma College of Medicine in Oklahoma City in 1953. After an internship with St. Luke's Hospital in Chicago, Illinois, he received his residency training at Lackland Air Force Base in San Antonio, Texas. Dr. Crawford was a member of the United States Air Force for nine years. He practiced at St. John's Hospital in Tulsa, Oklahoma, from 1960 to 1978 and moved to Fayetteville in 1978.

Dr. Crawford is a board certified Anesthesiologist. His mailing address in Fayetteville is Post Office Box 1621.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The patient has AV dissaciatian with an atrial rate af 140/minute and a ventricular rate af 95/minute. This is easier ta see an the rhythm strip than an the twelve lead trace. The patient has an intraventricular canductian defect present an the twelve lead trace with the QRS duratian measuring 0.12 sec ar mare but lacking features af bundle branch black. The rhythm strip, hawever, reveals runs of even wider QRS camplexes in a right bundle branch black with right axis deviatian pattern. This wauld af caurse make ane think of intermittent right bundle branch black with left pasteriar fasicular black. The Q-waves in I, AVL, and V_4V_6 plus ST elevatian in I, AVL, and the precardial leads suggest extensive infarctian. Lidacaine wauld nat be indicated. Mast centers wauld initiate temparary pacing. Mast features af "cardiagenic shack" are present. Anteriar infarctian, "shack", AV dissaciation and canductian system disturbance cambine ta yield a pragnasis much warse than in the usual infarct patient. Thus, remarks 2. and 3. are true while 1. and 4. are false.

July, 1982

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SCIENTIFIC ARTICLES

Autorhythmometry — A New Concept in Biology and Health Education 81
Dennis R. Glasgow, Lawrence E. Scheving, Ph.S., John E. Pauly, B.S., M.S., Ph.D. and Thomas A. Bruce, M.D.

Cochlear Implant: New Hope For the Totally Deaf 92
H. A. Ted Bailey, Jr., M.D., James J. Pappas, M.D., and Sharon S. Graham, M.S.

FEATURES

ECG of the Month 96
John W. Watson, M.D.

Guest Editorial: "Medical Science — The American Crucible" 97
Henry W. Thomas, M.D.

Editorial: "Medicine and the Environment" 98
Alfred Kahn, Jr., M.D.

From Other Years 99

Keeping Up 100

Things to Come 101

Personal and News Items 102

New Members 103

Obituary 104

Resolutions 104

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Autorhythmometry — A New Concept in Biology and Health Education

Dennis R. Glasgow, Lawrence E. Scheving, Ph.S., John E. Pauly, B.S., M.S., Ph.D., and Thomas A. Bruce, M.D.*

ABSTRACT

The students in three Little Rock public high schools participated in a study designed to acquaint them with some of the basic psychological and physiological rhythms operating within their own bodies. As part of a study known as "Operation Heartbeat" introduced into the science curriculum, these students performed a battery of tests at periodic intervals during their waking hours over a 72-hour period. The students took their oral temperature, pulse and blood pressure; subjectively rated their mood and vigor; estimated the passage of time; performed tests to determine their eye-hand coordination and digital dexterity; determined their ability to add random numbers; and measured their short-term memory, grip strength and peak expiratory flow. By graphing the results of these measurements, the students were able to demonstrate their own circadian rhythms and see how these rhythms related one to another at different times along the 24-hour time scale.

INTRODUCTION

It has been recognized that individuals respond differently to stimuli at various times of the day. Vigilance, sensory acuity, memory and the ability to learn as well as response to drugs appear to be influenced by biological time-of-day. Well-controlled investigations have shown that our metabolic and other physiological functions also undergo rhythmic changes during the day and night. Thus rhythms are ubiquitous at all levels of organization and in all forms of life, including man; oscillation is a fundamental property of life. These rhythms are not impressed from without as are conditioned reflexes; instead they are generated from within and are only synchronized from without by environmental factors (Scheving, 1976).

Life evolved in a rigid, periodic, geophysical environment. Among the geophysical rhythms are the Earth's rotation on its polar axis which gives rise to the day-night cycle. The Earth also travels a course around the sun, and that is responsible for the seasons. The lunar month and tidal cycle are the result of the complicated movement of the moon in relation to the earth. Although geophysical cycles were the original cause of many rhythms in living organisms, they are no longer necessary; because over the course of time these rhythms have become genetically encoded, and they now are capable of being generated by the organisms without the presence of a geophysical cycle (Scheving, 1976). The ability of the organism to measure time permits it to predict future events, and this has a selective advantage. It is important to remember, however, that if an organism is to measure and to utilize advantageously its changing environment, synchrony between the biological rhythms and geophysical cycles they mimic is essential. If the biological rhythm is not synchronized, it may persist with a frequency greater or less than that of the geophysical cycle, only attaining periodically a normal phase relationship for short spans because the frequency of the two rhythms is different.

The emerging field for the study of body rhythms is called chronobiology, *chronos,* meaning time; and it is currently receiving considerable recognition in the biomedical community. Chronobiologists believe that rhythmic variation in physiological and psychological functions is fundamental to life and that it offers the key to new insights into the physical, emotional and social health of the individual. There is even evidence that rhythms are altered in disease. Thus the question as to whether altered rhythmicities

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Supported by Winthrop Rockefeller Foundation.

are indicators of illness, and the more important question of whether rhythms can possibly fortify health, can now be studied.

If humans are constantly experiencing cyclic variation in their mental and physical capacities, are they adequately educated if they are unaware of the influence of these variations? With jet travel now so common, can a person be considered "health educated" if he or she is not informed of the great influence that biological "clocks" during travel might have on physical, mental and social performance? Is the supervisor who is responsible for scheduling shift workers acting in their best interests (or even in that of the company he represents) if he does not understand problems associated with shifting body rhythms? Are we now scheduling important examinations such as the SAT and MCAT at the best time for optimal performance? Are those in charge of making important decisions, such as diplomats and military commanders, at a disadvantage if they ignore or, even worse, fail to understand the temporal variation that characterizes their ability to function optimally in decision making? One science writer recently commented, "Not knowing that one has a time structure is like not knowing that one has a heart and lungs" (Luce, 1970). Furthermore, a person capable of "listening" to his or her inner rhythmicity can acquire a sense of mastery of self by anticipating hours of greater efficiency and accepting fluctuation in mood and abilities. It has been suggested that self-measurement of body rhythms should be a skill developed in students no later than in high school. Ideally, each individual and his or her physician should be aware of this unique temporal organization. The question asked is, can chronobiology and its implications for human health behavior be conceptualized by the typical high-school student? The answer to this question seems to be "yes," and perhaps this can be accomplished by even younger students (Halberg, et al., 1974).

It was Professor Franz Halberg of the Chronobiology Laboratories and the Department of Pathology and Laboratory Medicine at the University of Minnesota School of Medicine who first advanced the concept of teaching students early in life ways in which they could monitor their own health in a chronobiological manner. He and his colleagues put together a series of measurements for vital signs such as oral temperature, pulse rate, blood pressure and pulmonary functions. They also selected or developed several performance tests, among which were short-term memory, long-term memory and random addition, as well as tests designed to measure eye-hand coordination and physical strength which also changes along the 24-hour time scale (Halbert, et al., 1972).

We have taught students to make these measurements accurately; and then, after learning the process, they do them repeatedly while they are awake for at least 72 hours. Thus they come to appreciate the tremendous amount of variation that can be documented, not only in their blood pressure but in every other function they measure including their ability to perform mental and physical tasks. If they make measurements during what would normally be sleep time, many of the variations are even greater. They can demonstrate this fact by setting their alarm clocks and getting up to take measurements two or three times during the night.

Most of these rhythms are "silent" to all of us; they only become overt when they are systematically measured over a span of time, and this of course explains why so many rhythmic events have been overlooked so long. The concept of making such measurements on oneself is commonly called *autorhythmometry* (self-measurement of rhythms). The feasibility of carrying out such studies on a large scale in schools first was demonstrated by Halberg and his colleagues in the Minneapolis school system; their program has received considerable recognition as an innovative educational experience. According to the Minnesota group, both teachers and students were enthusiastic (Halberg, et al., 1974).

With the above as background, three Little Rock public high schools (Central, Hall and Parkview) agreed to introduce such a program into their biology curriculum. This program evolved through the efforts of several interested people in the community, the high schools and the University of Arkansas for Medical Sciences. Arkansas Children's Hospital agreed to evaluate further anyone who might be found to have previously undiagnosed hypertension. Among those involved in developing the program were the authors of this paper as well as Mrs. Elizabeth Blass, Chairman of the Development Foundation of the University of Arkansas for Medical Sciences, and Mr. John F. Coffin, Executive Secretary of the Foundation and Director of University Relations and

Development. The program also received the enthusiastic support of the Superintendent of Schools, Mr. Paul Masem, and Dr. Harry Ward, Chancellor of the University of Arkansas for Medical Sciences. Some financial support was obtained from the Winthrop Rockefeller Foundation. Moreover, a training film (made by KTHV-11) was developed to teach the students how to make such measurements. This kind of cooperation among many individuals is essential to the success of such a program. It is the teachers, however, who *make it work*: without their interest and hard work, the program will not be successful.

It shall be the objectives of this paper to: (1) describe each of the measurements that the student learns to make, (2) explain the rationale for doing each of them when it may not be apparent, and (3) comment on the problems encountered during the first year of the program. In a future paper we shall present the results of the analyses conducted on the data collected during the past year. We emphasize that the primary object is *educative* and not simply to gather experimental data.

DESCRIPTION OF TESTS

It should be emphasized that all of the tests we describe below were developed and have previously been described by Halberg and associates at the University of Minnesota (Halberg, et al., 1972). Figure 1 shows the instruments used to make the various measurements along with a bag in which the student carries the instruments. The name selected for our particular program was "*Operation Heartbeat.*"

The following procedures are explained in the sequence in which the subject performs them, and they are presented here in the same form in which they were given to the students.

General Instructions: (1) The first thing to do is to find a spot where you can sit down and take the measurements without being disturbed; a table or desk is best. *Avoid distraction or noise. Remember* measurements should be made at least 20 minutes after anything that would affect oral temperature, such as hot or cold drinks, strenuous exercise, singing, being in a sauna or out in the cold. On the data sheet provided (Table 1), record your school, name, age, sex, race, month and sheet number. Then record the day, hour and minute. Time is recorded according to the 24-hour system with local midnight equal to 0000 hours, local noon to 1200 hours, 1:00 p.m. to 1300 hours, etc. (see time chart in Figure 1). For example, 1 minute past midnight would be written 0001, 30 minutes past would be 0030, 8:20 a.m. would be 0820, and 8:20 p.m. would be 2020. Moreover, data should always be recorded by Standard Time (Central Standard Time if you live in Arkansas), not by Daylight Savings Time; this simply is a convention of science. Of course, if you travel to another time zone while carrying out your series of studies, time would be recorded according to



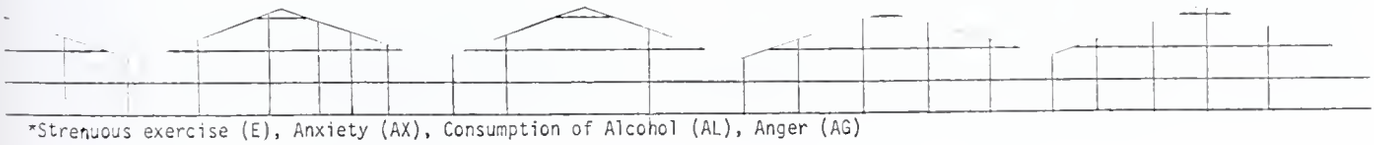
Figure 1.
This photograph shows the different instruments and materials contained in the kit furnished to the students.

Table I

CHRONOBIOLOGY LABORATORIES, DEPARTMENT OF ANATOMY, UNIVERSITY OF ARKANSAS, AND LITTLE ROCK PUBLIC HIGH SCHOOLS

High School_____ Name_____ Subject Code_____ Age_____ Sex____ Race_____ Month_____ Sheet____

Day	Time Zone	Time: Arise	Retire	Now	M	V	Time Est.	Pls Min	Blood Press. Syst./Diast.	Eye-Hand Skill	Ring Test	Fing. C'tg.	Randm # Add	Randm # Mem	Oral Temp	Strength Rt	Left	Peak Flow I	II	Comments*



*Strenuous exercise (E), Anxiety (AX), Consumption of Alcohol (AL), Anger (AG)

the new zone. The next step is to record the time you got up this morning and then the time of the first measurement under the column headed "now." It is important to remember to also record the time of retiring each night.

(2) *Oral temperature.* Pick up the thermometer and shake the mercury column to below the 96°F mark. Be careful not to strike it against some object and break it. Place the bulb as far back under your tongue as is comfortable and leave it there for at least three minutes; five minutes is better. Record the value on the data sheet to the nearest 0.1 degree.

(3) *Mood and vigor rating.* While taking your temperature you should also record mood and vigor ratings. Both of these use the 1-7 point scale listed below.

MOOD		PHYSICAL VIGOR
Depressed, "blue"	1	Inactive, tired
Somewhat depressed	2	Somewhat tired
Slightly less cheerful than usual	3	Slightly less active than usual
Usual state	4	Usual state
Slightly more cheerful than usual	5	Slightly more active than usual
Quite cheerful	6	Quite active
Happy, elated	7	Active (full of pep)

(4) *Minute estimation.* Start the stop watch and estimate one minute. Look away from the dial and wait for what seems like exactly one minute to go by (you may count from 1 to 60 at a nearly steady pace if you wish). Stop the watch when you believe a minute has passed and record the actual *number of seconds.*

(5) *Pulse (heart rate).* Place two fingers firmly over the radial artery in your wrist (close to the base of the thumb). Do not take this measurement with the thumb, because it has a pulse of its own. Count the number of beats for a full minute and *record* this value. Do not use the short-cut method of counting for only a half or a quarter of a minute and then multiplying; this will reduce your accuracy considerably.

(6) *Blood pressure.* Open the exhaust valve of the blood-pressure cuff and deflate it. Wrap the cuff firmly around the biceps of your upper right arm (or upper left arm, if you are left handed, in which case note under "comments" on sheet one). Your forearm should rest on the table at the level of your heart. Tighten the cuff and close the exhaust valve. Pump the bulb until the dial reads about 160 mm Hg (or at least 20 mm above your highest previously recorded pressure). The purpose of this is to put enough pressure on the radial artery so that the blood flow through it stops. Carefully place the stethoscope diaphragm on the antecubital fossa (front of the elbow joint) and listen for beats. If beats are heard immediately, deflate the cuff and inflate it again to a pressure at least 30 mm higher than originally. If beats are no longer heard, partially release the exhaust valve so that the pressure drops *very slowly* (about 2 mm per second). As the needle moves slowly, record the dial reading when the first pulse beat is heard *(systolic pressure)* and when the pulse beat disappears or drops considerably in volume *(diastolic pressure).* Always use the opposite hand to squeeze the bulb (if the hand used to pump air into the cuff is on the arm wearing the cuff, the pressure values will be driven very high in that arm). If you have the thermometer in your mouth while making the blood-pressure measurement, be careful that you do not knock it out with the stethoscope or bite it while wrapping the cuff around your arm or when you are squeezing the bulb of the sphygomomanometer.

(7) *Eye-hand skill (E-H skill).* Remove the small tube from the coordinometer and screw it onto the top of the case. Wipe your hands free of sweat and transfer all 35 beads to the standard bead bowl. Place the coordinometer on the left. (Note: the table should be at a comfortable height.) Hold the stop watch in your left hand, face down. Do not hold the coordinometer. Start the stop watch and simultaneously begin transferring beads into the tube and counting them one by one as fast as possible, using the right hand under visual control. After 30 beads have been placed in the tube, stop the watch and record the elapsed time to the nearest 0.2 second. (The arrangement of the coordinometer, bead bowl and stop watch should be reversed for a left-handed subject.) An extra five beads are included so that several may be dropped accidentally without running out of beads before completing the test. Once a week clean the beads by soaking in soap or detergent and water, rinsing and air drying them.

(8) *Nut-threading ring test.* The ring test of eye-hand coordination should be carried out in a standardized sitting position. You should hold your shoulders upright and back, heels touching, chin up and look forward. The thumb and first

two fingers of the left hand should be placed around the left side of the ring and the last two fingers below the ring, with the hand grasping the ring at a 90° angle to the left of the thread, which should be at the top of the ring at eye level (left-handed subjects should reverse the sequence). The nuts at the bottom of the ring should be so arranged that the colored nut is the first in the sequence. Once the ring is firmly in hand, start the stop watch with your free hand and begin to thread the four nuts, one at a time, through the threads as fast as possible with the free hand. Once the nut is properly in line on the thread (use your eyes), a twirling motion to speed up the threading may be used. After the last nut is completely through the threads, stop the watch and record the elapsed time.

(9) *Finger counting (fngr. cntg.).* Hold the stopwatch in your left hand. Raise your right hand, palm upward, elbow flexed to a horizontal position; allow for good separation of fingers. Start the watch, touch the thumb to the index finger and silently count "1"; then move the thumb to middle finger and count "2". Continue moving the thumb to the fourth and fifth fingers, and then go back to the index finger, as *fast as possible*, until the count of "25" is reached. On the 25th count, the thumb should touch the index finger. If the count is not correct, start over. Immediately repeat the count to 25 as above, and stop the watch after the second count of "25". Record the elapsed time to the nearest second.

(10) *Random number addition (r-number-add)*: Refer to the random number tables (Table 2). Enter your name, school and the consecutive sheet number in the spaces provided on the top of each table. Place the stopwatch face down on the table, start it and as quickly as possible accurately add consecutive pairs of digits in a single column of random digits (entering each pair-sum to the right of the column, between digits). For example, for a column with digits 7, 1, 5, 2, 9, etc., the first sum would be 7 plus 1 equals 8, the second sum 1 plus 2 equals 7, etc.

(11) *Short-term memory*: 7-digit random numbers (Table 3). Enter your name, the year, month and consecutive sheet number in the spaces provided at the top of each SHORT-TERM MEMORY sheet. Record the day and the reference time zone, hour and minute of both reference (indicate) and local time zones, in boxes provided at left of each row of numbers. Hold stopwatch

Table 11

RANDOM NUMBER ADDITION

Name _____ High School _____ Sheet No _____

	0	3	9	3	1	1	0	4	6	1	9	3	7	1	6	1
	6	8	9	4	6	6	0	8	3	2	4	6	5	3	8	4
	6	0	9	5	8	2	3	2	8	8	6	1	8	1	9	1
	6	1	3	8	5	5	5	9	5	5	5	4	3	2	8	8
	6	5	9	7	8	0	0	8	3	5	5	6	0	8	6	0
	2	9	7	3	5	4	7	7	6	2	7	1	2	9	9	7
	3	8	5	3	1	7	5	4	6	7	3	7	0	4	9	2
	0	5	2	4	6	2	1	5	5	5	1	2	1	2	9	7
	8	1	5	9	0	7	6	0	7	9	3	6	2	7	9	5
	4	5	8	9	0	9	3	2	6	4	3	5	2	8	6	1
	9	5	7	1	9	0	6	8	3	1	0	0	9	1	1	9
	8	9	3	6	7	6	3	5	5	9	3	7	7	9	8	0
	8	6	3	0	0	5	1	4	6	9	5	7	2	6	8	7
	7	7	3	9	5	1	0	3	5	9	0	5	1	4	0	6
	0	4	0	6	1	9	2	9	5	4	9	6	9	6	1	6
	3	3	5	6	4	6	0	7	8	0	2	4	1	2	2	6
	6	5	9	1	7	7	6	9	9	0	6	9	9	4	1	4
	8	4	5	4	6	6	7	2	6	1	9	5	8	7	7	1
	0	0	9	0	8	9	9	7	5	7	5	4	6	1	1	9
	6	3	0	2	3	1	9	2	9	6	2	6	1	7	7	3
	4	1	8	3	9	5	5	3	8	2	1	7	2	6	7	7
	0	9	4	3	7	8	0	3	8	7	0	2	6	7	3	0
	5	3	2	2	1	7	0	4	1	0	2	7	4	1	2	2
	0	2	3	9	6	8	5	2	3	3	0	9	1	0	0	6
	1	6	8	8	2	9	5	5	9	8	6	6	6	4	8	5
	0	3	7	8	8	9	7	5	9	9	7	5	8	6	7	2
	0	7	1	7	7	4	4	1	6	5	3	1	6	6	3	5
	2	0	8	3	3	7	4	8	7	5	3	9	0	8	8	8
	2	3	4	8	2	2	8	6	3	3	7	9	8	5	7	8
	3	4	7	6	1	9	5	3	1	5	2	6	7	4	3	3
	3	5	6	6	3	5	2	9	7	6	1	2	8	1	8	6
	0	3	1	1	6	0	3	6	5	9	4	6	5	3	3	5
	0	7	5	3	3	9	4	9	4	2	6	1	4	2	9	2
	9	7	0	1	9	1	8	2	8	3	1	6	9	8	9	5
	4	7	3	2	3	1	8	3	7	9	9	4	2	4	0	2
	5	6	6	2	3	3	4	4	4	2	3	4	9	9	4	4
	1	3	7	4	7	0	7	0	1	1	4	7	3	6	0	9
	9	5	8	1	8	0	6	5	3	2	9	6	0	0	7	4
	0	5	3	6	4	0	9	8	3	2	3	2	9	9	3	8
	5	4	1	6	0	0	1	1	1	3	3	0	7	5	8	6
	1	5	9	1	7	0	6	2	5	3	1	9	3	2	7	5
	3	8	4	5	5	7	6	2	0	5	2	6	6	0	6	6
	4	9	7	6	8	6	4	6	7	8	1	3	8	6	6	5
	5	9	1	9	6	4	0	9	9	4	1	3	1	1	2	2
	0	9	4	7	4	7	0	7	3	9	9	3	7	4	0	8
	4	8	5	0	9	2	3	9	2	9	2	7	4	8	2	4
	5	4	7	6	8	5	2	4	4	3	5	1	5	9	3	1
	7	5	1	5	7	2	6	0	6	8	9	8	0	0	5	3
	3	9	1	5	4	7	0	4	8	3	5	5	8	8	6	5
	1	2	2	5	9	6	0	3	1	5	2	1	9	1	2	1
Sec																

in left hand, with face down. Start stopwatch, look at first 7-digit number, cover it with bottom part of stopwatch and write the number in the space provided. Proceed with the next number in the same manner. After the last 7-digit number in the row has been written down, stop the watch and record the elapsed time to the nearest 0.1 second in the space provided under "Sec" at right of the sheet. Also record the total number of incorrect digits under "Err". Each digit in the written number should be compared with the respective digit in the printed number. If 8175945 was written 8179545, *two* errors were made.

(12) *Dynamometer readings.* Turn the needle-follower to zero before making each test. Stand up and assume a military stance (eyes forward, shoulders back, with feet about a foot apart). With the dynamometer held comfortably in the right hand, extend your arm downward at about a 30° angle from the body and squeeze. Record the value indicated by the needle-follower. Repeat with your left hand.

(13) *Peak expiratory flow (PEF).* The peak flow meter should be held in both hands with the dial facing vertically. Make sure the indicator is on zero. Inhale as deeply as possible, put the mouthpiece to your lips and exhale as hard as you can in a short, sharp blast. Record the indicator reading as accurately as possible.

Table III

CHRONOBIOLOGY LABORATORIES, DEPARTMENT OF ANATOMY, UNIVERSITY OF ARKANSAS, AND LITTLE ROCK PUBLIC HIGH SCHOOLS

SHORT-TERM MEMORY: 7-DIGIT RANDOM NUMBERS

Day	Local Time		Name_____ Year_____ Month_____ Sheet_____									Sec	Err
			7410888	2228857	0740152	5704910	3501755	1475048	9683860	3628808	7873951	6059221	
			2230490	3147287	7173343	9283051	4911748	1210280	5804186	7177105	9621065	5407850	
			7395079	4431794	4056005	0478033	4325852	5890558	2163961	8498659	9326660	6742792	
			9504352	6804678	0564870	9971594	8137006	2218564	2449103	0455477	0818598	4996169	
			4592165	7874171	7198309	4557589	3173257	2604767	0076544	6376253	6694746	4958069	
			1703740	3869959	0307943	0471803	2683505	5111245	9913140	8345889	7535941	8577108	
			1055998	7871122	1476157	2776743	5848530	1889772	9490697	1473035	4120774	6990931	
			0130251	4338540	6615243	4772466	7334743	1439053	1048566	9980217	3629298	5252433	
			5244322	2489643	2775887	4114661	6082108	7562004	9039161	1055741	1063686	3856307	
			4308670	8474154	1275732	6266291	9087244	7288779	3054027	8661732	7545460	3114282	
			4373014	2678459	9043242	1737452	0037070	7702145	9739714	8492003	9809676	6687320	
			9592921	1973029	0233250	7852651	5941645	3946143	9014970	6683012	9832255	7177628	
			6669213	9869983	7005828	1232449	8709504	9641290	1937956	8440712	8091073	2977037	

(14) Make any comments that might have affected any of the tests.

COMMENTS RELATIVE TO THE TESTS

Mood and Physical Vigor: Psychologists believe that a rather objective measure of a person's mood or physical vigor can be obtained by simply having a check list consisting of short phrases designed to suggest an attitude or a condition. Our sequence of tests has such check lists for evaluating mood and vigor. The subject is asked to respond to a series of short phrases using a numerical scale of 1-7. Two of us (LES and JEP) have used such tests on several different categories of subjects including young, healthy soldiers (Kanabrochi, et al., 1973), patients (Scheving, et al., 1975) and elderly subjects (Scheving, et al., 1974). It has been our experience that this seemingly subjective evaluation works, that one can reproduce data from one day to the next, and that all groups seem to have essentially the same phasing. Figure 2 (H-I) illustrates the variation mood and physical vigor that was self-measured along a 24-hour time scale by a group of young, healthy soldiers. Figure 3 shows the results of another vigor evaluation done on a group of blinded individuals of varying ages, all living under a similar social routine (Pauly, et al., 1977). Note the similarity of the phasing of the vigor rhythms in the two groups (compare Figure 2I with Figure 3). Clearly mood as well as physical vigor appear to vary in a circadian manner, with "best" mood and vigor associated with wakefulness and reaching a peak about mid-afternoon. Others have shown that there is a rhythm in friendliness and that it peaks about mid-day. Maximum anxiety is associated with the early morning hours which is something most of us have experienced.

Passage of Time: We are aware that our perception of the passage of time may vary depending upon whether we are engaged in a dull or tedious task or, by contrast, whether we are very active or happily occupied to the degree that we pay little attention to time. Our ability to perceive the passage of time also varies in another way, and it can be correlated with biological variation. For example, when asked to estimate a 60-second interval at different times of the day (different circadian stages), there is a tendency to overestimate at one circadian stage and to underestimate at another. This variation was dis-

covered by a distinguished Harvard physiologist who was sent to the drugstore for medicine by his wife who was sick with influenza. When he returned 15 minutes later, he was surprised that his wife inquired why he was gone so long. He immediately took her temperature and asked her to estimate what she considered to be an interval of 60 seconds by counting at a rate that she thought would be about one numeral per second. He repeated this test, using a stopwatch, more than forty times during her illness and plotted the results against her oral temperature which varied between 97.4° and 103°F. He found that she unknowingly counted faster at higher body temperatures than at lower ones. Therefore, at higher body temperatures she subjectively surmised that time passed rapidly; but this judgment was erroneous, for the time seemed to drag (cited from Palmer, 1976). He extended his studies using other subjects and far more elaborate techniques, and concluded that the subjective perception of time passage is a secondary consequence of the body's daily temperature. The ability to estimate time (E) may be correlated with oral temperature (A) in a group of young soldiers (Figure 2).

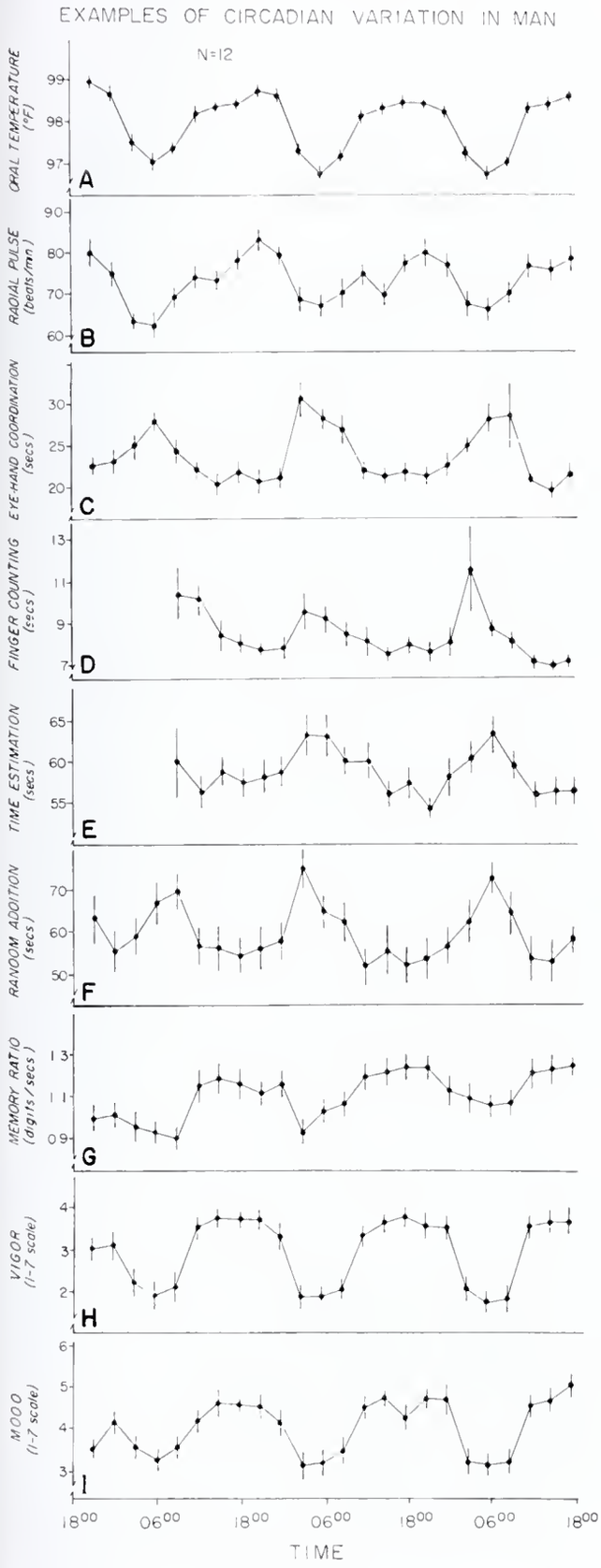


Figure 2.
Rhythmic variation in diverse variables in a group of 12 presumably healthy young men over a 72-hour period (sampled at 3-hour intervals). Note that the time of poorest performance in C, D and F represents the crest of the rhythm. Meal times: 0615, 1215 and 1630 hours; rest or sleep time: 2100-0600, however subjects were awakened for sampling at 2400 and 0300 (Scheving, 1978).

Pulse (heart rate): The average heart rate for a young adult is slightly over 70 beats per minute during wakefulness but may drop to a lower rate at night, even though he or she might not go to bed. It has been recognized for a long time that heart rate also is related to body temperature. For every 1°F rise in temperature, the heart rate increases 10 or 15 beats per minute. Figure 2 illustrates the heart rate (B) and temperature (A) rhythms plotted side by side for a group of subjects. Of course the heart rate is easily perturbed; and the post-prandial (after eating) increase is especially prominent when one monitors heart

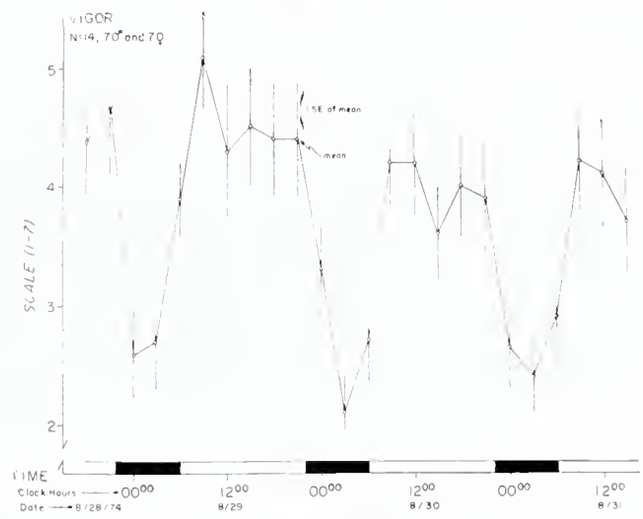


Figure 3.
The individuals gave a subjective rating for vigor on a scale of 1 to 7. The population tested consisted of 7 male and 7 female blinded individuals (Pauly, et al., 1975).

rate repeatedly along the 24-hour time scale. Therefore the pulse should be taken before eating.

Blood Pressure: The rhythm in blood pressure may have a very high amplitude in some individuals. About mid-sleep, a rise in diastolic pressure precedes that in systolic blood pressure, pulse and activity. The sequence of changes is preparatory to awakening and is not simply secondary to the sleep and wakefulness cycle, because blood pressure will begin to rise even though the subject remains up and active during the night. Figure 4 illustrates the pattern of fluctuation in both systolic and diastolic blood pressure for a group of 20 untreated hypertensive patients compared with the pattern for a group of five normal subjects (normotensive). Clearly normal readings for many of the hypertensive patients were obtained at certain times of the day. Figure 5 illustrates a record of 17 days (around the clock) of blood-pressure recordings of a 61-year-old man hospitalized for study at the National Institutes of Health. By conventional standards, it can readily be seen that this patient was normotensive every morning; but the blood pressure determined in the late afternoon provides equally convincing evidence that the patient was hypertensive. Figure 6 shows the variations in systolic and diastolic blood pressure of a 53-year-old executive who was, at the time of making the measurements, on medication to control his blood pressure. Clearly the rhythm persists even while one is taking medications. It is interesting to note that the highest peak in systolic blood pressure occurred on a day (11-5-79) when this man was conducting an all-day executive meeting, thus demonstrating the effect of stress. Note that on the abscissa the dark bar in-

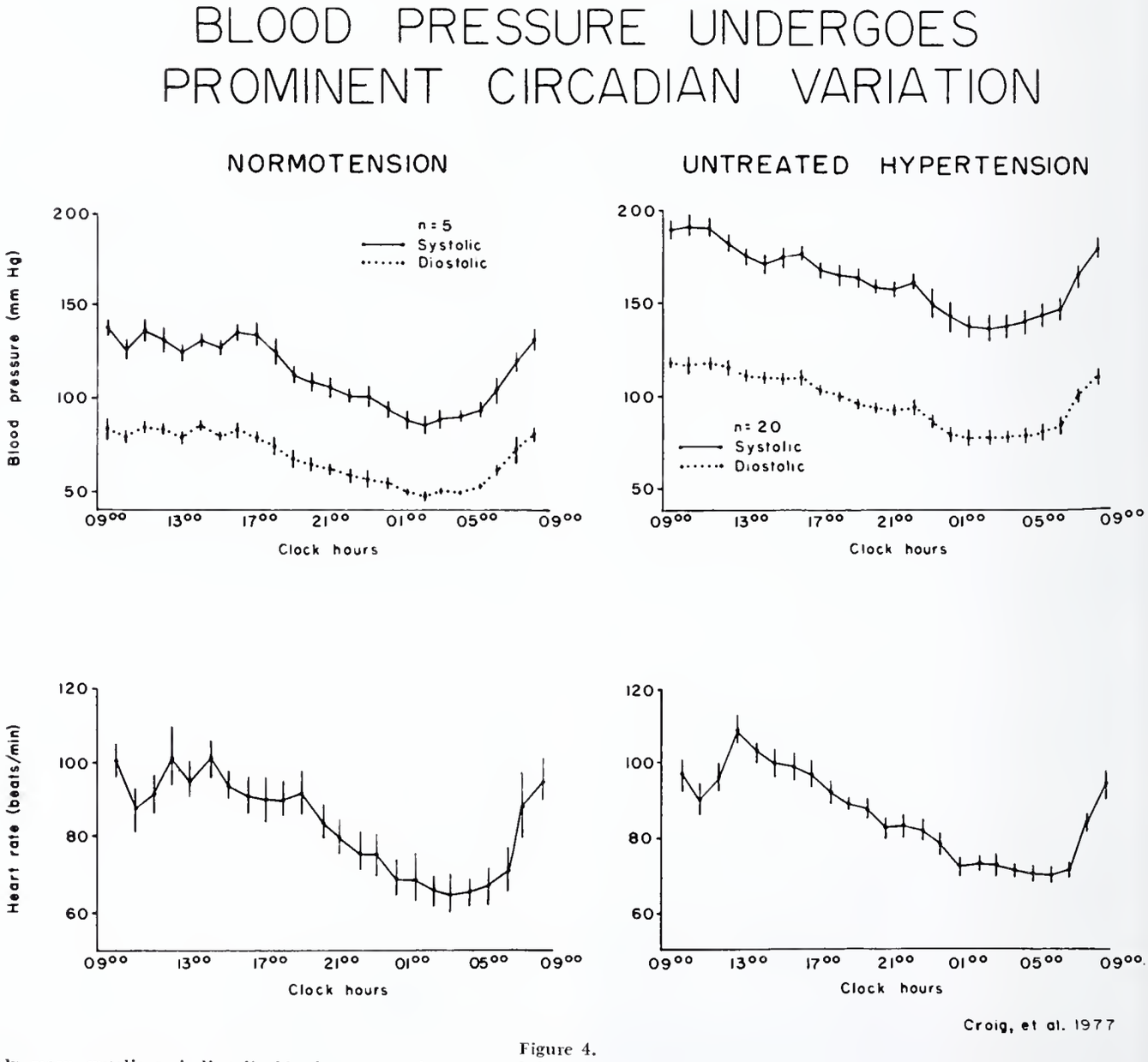


Figure 4.
Hourly mean systolic and diastolic blood pressures in untreated hypertension (20 patients) and in momotensives (5 patients). Also illustrated is mean heart rate (Miller-Craig, 1977).

dicates what he reported as his sleep or rest time during the monitoring span. Since no measurements were taken during the sleep time, it is quite likely that the trough each night fell much lower than is indicated on the graph.

Performance Tests: It is well documented that eye-hand coordination varies considerably along the 24-hour time span, and this can be demonstrated with the test which involves dropping beads into a box and with the simple finger-counting exercise. With such tests it is not uncommon to see as much as 30% to 50% variation from one individual to another, even after the learning period. Figure 2 demonstrates that the best eye-hand coordination (C) occurs about the time of peak body temperature (A). (Note that the peak of this and other performance rhythms actually represent the slowest or "worst" time, and the troughs represent the fastest or "best" time.) It has been disconcerting to pilots of transoceanic jetliners to learn that from the time they take off from New York in the evening until they land several hours later in Europe, their eye-hand coordination may deteriorate continually.

There has been a great deal of interest in variation of performance. Over the years we have frequently heard the statement that efficiency is impaired at night and that this follows the drop in body temperature. This statement is correct based upon evidence from a number of studies. As early as 1934, Freeman and Holvand reviewed much of the evidence available and concluded: "The balance of evidence apparently favors an afternoon superiority for sensitivity and motor performance." This relationship is seen by comparing the rhythms of eye-hand coordination (C) and finger-counting (D) with temperature (A) in Figure 1.

As early as 1916, Gates found performance on letter-cancellation and maze-tracing tasks to improve fairly steadily over the whole of what he described as a school day. A similar conclusion was reached by Kleitman in 1939; although he failed to distinguish between different types of tasks, an omission which, according to Folkard (1980) who recently reviewed this subject, has had serious consequences for subsequent research and theory in this area. According to Folkard, Kleitman (a dominant influence in this area for many years)

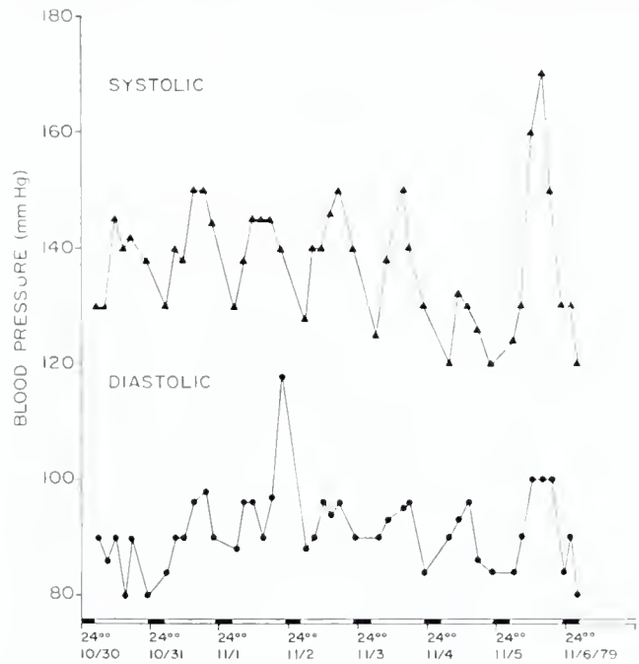


Figure 6.
Illustrates the variation in systolic and diastolic blood pressure carried out by self-measurement by a 53-year-old executive. He was on medication at the time for hypertension. On the last day he was chairman of an all-day meeting which may account for the rather high peak in systolic and diastolic blood pressure on this day.

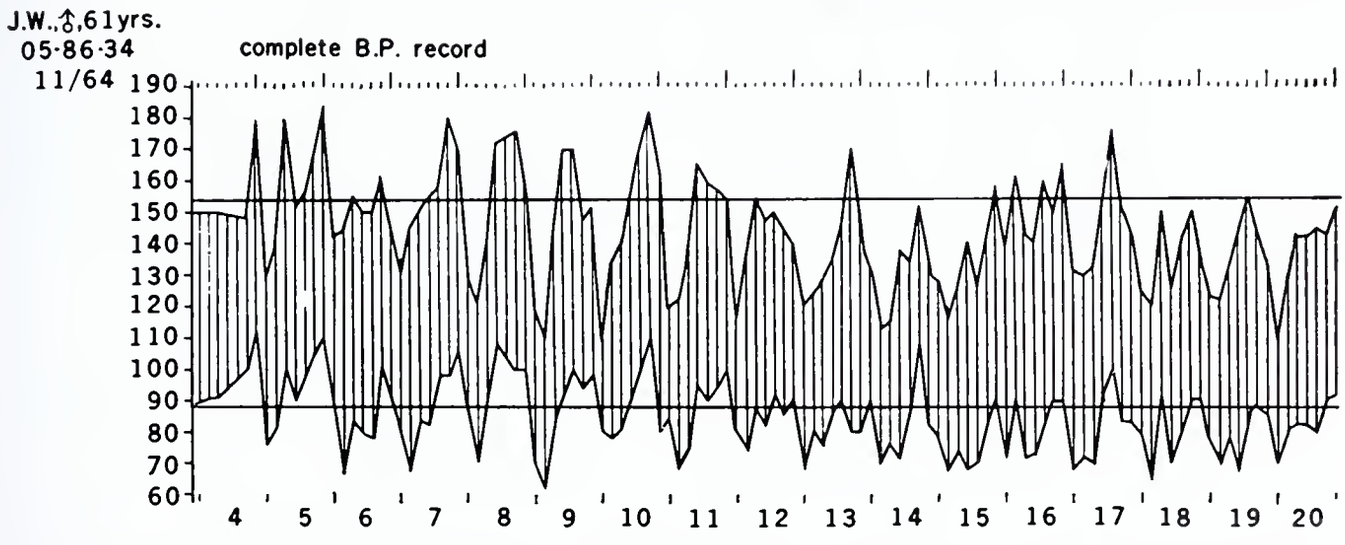


Figure 5.
Blood pressure measurements taken six times each day for 17 days in a 61-year-old patient. By conventional standards, this patient was normotensive every morning; yet the blood pressure determined each day at 6 p.m. provides equally convincing evidence that he was hypertensive (Bartter, 1974).

emphasized those performance studies that involved perceptual-motor type performance. Thus, by restricting himself to such tasks, he concluded that performance improved over the day; he ignored other, more complicated tasks. Kleitman placed a great deal of importance on the parallelism that exists between such circadian variation in performance and the circadian rhythm in temperature. His theme (according to Folkard) always was to argue for a casual relationship between body temperature and performance. Colquhoun, in 1971, supported the idea of parallelism between the circadian rhythm in temperature and that in certain performance tasks; he rejected the idea of a casual relationship between the two. Folkard has gone a step further and claims that if there is parallelism between body temperature and performance it is dependent on the type of task being performed. However, memory-loaded cognitive tasks are performed quite well at night (Folkard, 1980). Recognition of this may be of great significance, because today many shift workers are required to perform complex cognitive tasks and thus may be utilizing very different informational processing capabilities than those demanded by the manual tasks which were characteristic of so much shift work in the past. Truly this whole question of when is the best time for optimum performance must take into consideration the tasks to be performed. This undoubtedly will be a task for the psychologists of the future.

Peak expiratory flow and grip strength both vary rather dramatically, and Figure 7 is an example of peak expiratory flow of a group of blind individuals all living under similar circumstances (Pauly, et al., 1977).

CONCLUSIONS

At the time this paper was written, we were approaching the end of the 1980 school year. As might be expected a number of problems have arisen in carrying out "Operation Heartbeat." Approximately 492 students from the three high schools have gathered data, 292 from Central, 13 from Hall and 187 from Parkview; our original goal was 1,500. Most of them did a good job; some (in the minority) were careless in collecting data that otherwise would have been useful in evaluating for circadian variation. However, we believe that even those individuals must have learned a good deal about their own body measurements.

Some equipment was stolen from the stockroom, but it has been replaced. Instruments malfunctioned but remained in better shape than had been predicted by some at the beginning. For the future we recommend a sphygmomanometer cuff that is easier for the student to put on; these are now available. Of course, the program resulted in additional work for the three teachers who took the study seriously, and they are to be complimented.

One major problem was that the battery of measurements required more time to complete than the original estimation of three minutes. When measurements made during school hours required more than the five minutes between class periods, some teachers from non-biological disciplines complained about the infringement on their class time. Another problem involved scheduling the measurements so that minimum class disruption occurred. When students attempted to adhere to a rigid interval of three hours between measurements, the tests frequently had to be done in the middle of a class period. Teachers who were not informed about "Operation Heartbeat" sometimes objected to the interruptions. These problems were solved later in the school year with the help of the high school principals by reducing the number of tests per session during the school week, informing all teachers about the program, and requesting that the last five minutes of class time be set aside for students to make their measurements.

Several recommendations are being made for the 1981-82 school year. One is that students carry out the entire battery of measurements only on weekends and continue the reduced number during weekdays. The emphasis will be on vital signs such as oral temperature and blood pressure. Another recommendation is that biology teachers participating in "Operation Heartbeat" spend some time during an inservice meeting sharing ideas about implementation of the program. Some teachers had successful methods for minimizing equipment loss; other teachers had unique procedures for teaching students to make the measurements and record the data. Sharing these ideas will help all teachers do a better job of implementing the program next year. A third recommendation is that a revised data sheet be developed for the reduced battery of measurements. This will conserve paper and prevent errors that are likely to occur when some columns

are filled in and others are left blank. Consideration will be given to a computer ready data sheet that will eliminate the middle step of keypunching the data.

The data that are meaningful for analysis of circadian variation (395 students) are being prepared at the present time for analysis. Halberg and his colleagues (1972) have developed computer programs designed especially for analysing time-series data. Their method will be employed, and it will be described at the time the results of this study are presented. It is the goal of this program to have the high schools develop the capability of analysing the data themselves. The facilities at one high school (Parkview) are almost adequate in that they have a suitable computer available. Some effort will have to be expended writing programs, etc.

In general, it is the opinion of the authors that the program went quite well considering it was the first year; certainly in the coming year it should improve and many more students must be involved to meet our original objectives.

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Cochlear Implant: New Hope for the Totally Deaf

H. A. Ted Bailey, Jr., M.D., James J. Pappas, M.D., and Sharon S. Graham, M.S.*

During the past quarter century, dramatic advances have been made in otologic medicine and surgery. Surgical improvements have reduced associated risks and morbidity, while improving hearing results obtained. Stapedectomy provides excellent relief from conduction hearing loss due to fixation of the stapes from otosclerosis. Through various tympanoplasty procedures, tympanic membrane and ossicular chain defects can be repaired to restore a functional sound conduction mechanism. Myringotomy of the drum with tube insertion provides ventilation and drainage, resulting in dramatic hearing improvement for cases of persistent middle ear effusion. Recent advances have also been made in surgery for a very few sources of nerve or sensorineural deafness, including transtemporal approaches for removal of acoustic nerve tumors and endolymphatic shunt for Meniere's Disease.

For the majority of patients with nerve type deafness, however, there presently is limited medical or surgical treatment. Fortunately, with the electronic advances made in hearing aid design in the last few years, nearly any patient with nerve type loss, be it mild, moderate or severe, can receive some benefit from the use of an aid.

These advances, however, leave out the profoundly deaf, that is, those patients with total nerve type deafness, a group unable to benefit from hearing aids and a group for which there has never been any medical or surgical treatment. Total sensorineural deafness is a devastating condition, locking a person out of communicative contact with his fellow man.

In June, 1979, the authors began participation as a coinvestigation team in an international project involving surgical implantation of electrodes and rehabilitation through speech and hearing therapy for the totally deaf. This participation is coordinated through the primary investigator, Dr. William F. House of the House Ear Institute, located in Los Angeles, California. There are fifteen coinvestigation teams, located in the United States, Japan, South America and Europe. All teams use identically designed implant devices, and follow rigid protocol regarding evaluation, surgery and rehabilitation of patients. The cochlear implant is currently in the third phase of Food and Drug Administration investigation, known as "clinical trials." As a part of the FDA regulation, all coinvestigators file data with the House Ear Institute of Los Angeles, which in turn then files pooled data with the FDA.

Even though Alessandro Volta, an Italian physicist, discovered by accident around 1800 that an electric current passed through the head could cause an individual to perceive sound, it has not been until the past twenty years that electrical stimulation has been seriously attempted in the deaf. It has, however, been theorized for a long time that if a minute electrical current of sufficient complexity could be applied to the ear, that auditory perception could be stimulated in the deaf.

These concepts have intrigued Dr. William F. House of Los Angeles and a number of other researchers around the world over the last two decades. Dr. House first became interested in the possibility of a cochlear implant when a patient of his brought him a newspaper clipping in 1957. This clipping described the work of two French doctors, Djourno and Eyries, who had attempted to stimulate the auditory system with a crude electrode. This news clipping was to initiate twenty years of intensive study and research on the part of Dr. House.

Extensive information was first gathered regarding tissue tolerance with implanted electrodes in animals. Electronic advances, gained primarily from intensive communication research in the space industry, were then combined with the tissue tolerance studies to create an implantable device for the deaf. In 1961, two patients were implanted with a hard wire or percutaneous electrode system for purposes of further research in electronics design for sound transmission. It took the remainder of the decade of the 60's to work out the signal processing design within the device so that sound could be transmitted efficiently.

During the 1970's, the Food and Drug Administration allowed the initiation of a limited clinical trials program, in which Dr. William House implanted 40 patients in Los Angeles. In 1979, Dr. House invited a number of coinvestigators to join him for a more widespread clinical trials program.

Currently in the United States there are approximately 150 implant patients. These patients

*The Ear & Nose-Throat Clinic, P.A., 1200 Medical Towers Building, Little Rock, Arkansas.

have now experienced a total of over 500,000 hours of electrical stimulation. One patient alone has accumulated 50,000 hours of implant use, having worn the implant on a daily basis for ten years. Medical, audiological, and psychological assessments have found no evidence of any adverse effects from the electrical stimulation of the auditory system; there has been no evidence of infection, meningitis or other serious postoperative complication. In addition, there has been no evidence of tissue rejection, and no deterioration of the implanted electrodes. Histological studies on a few patients deceased from other causes have shown minimal disturbance to the cochlea as a result of the electrode insertion.

Current criteria for consideration of a potential implant patient include the following strict requirements: First, the patient must be 18 years of age or older. No children are being accepted for implantation by coinvestigators at this time. Second, the loss of hearing must be profound bilaterally, that is, 95 dB or worse at all speech frequencies. In addition, the loss must be sensory in origin—that is, coming from the nerve endings in the cochlea itself rather than from the eighth nerve or any higher central level. Third, the loss must *not* be congenital, that is, it must have been acquired after the patient developed speech and language. Patients who have had hearing at one time are able to assist in making changes in device design, by comparing the sounds they hear with their memory for normal sound. In addition, those with a memory for sound find it easier to learn to use the new cues provided by the implant. Fourth, the patient must not be able to receive significant benefit from a conventional hearing aid. If a very strong aid provides significant benefit, the best recommendation is continued use of a conventional amplification. Fifth, the patient must have normal intelligence and emotional stability.

Evaluation of potential implant patients begins with a detailed history of the hearing loss and a complete otolaryngological examination. This includes microscopic examination of the ear canals and tympanic membranes, electronystagmography to evaluate the function of the vestibular system bilaterally, and a promontory electrical stimulation test. This promontory test is crucial in determining those patients who will be stimulatable by the implant. Under local anesthesia, a needle electrode is inserted through the tympanic membrane onto the promontory in the middle ear. A minute electrical voltage is then activated across the electrode. If the eighth nerve and higher central auditory pathways are sufficiently viable, the patient will perceive an auditory stimulus in the form of a buzz or ring. Polytomography of the inner ears is obtained to rule out any ossification of the hollow passages of the cochlea, since such blockage might prevent insertion of the electrode.

The otolaryngological examination is accompanied by a thorough audiological evaluation, including the basic battery of hearing tests for determination of hearing sensitivity and ability to understand speech. In addition, the audiological battery includes an intensive evaluation to assess any significant improvement with a very strong hearing aid. The patient's performance with the aid is compared to normative data available from implant patient performance. This comparison allows an estimation to the patient as to whether or not they will perform better with an implant or a conventional hearing aid. Evaluation by a speech pathologist includes assessment of voice, pronunciation, language development and lipreading ability. Patients are also evaluated by a psychologist. This evaluation includes measures of intelligence, personality, and organicity in the central nervous system. Measures of learning ability give some indication as to whether or not the patient will be able to take new auditory cues provided through the implant and learn how to utilize them in a new symbolic system.

All of these evaluations are accompanied by extensive counseling on the part of the otologist, the audiologist and the psychologist. Every effort is made to be certain the patient has a realistic expectation of the benefits and limitations of the cochlear implant.

Surgical implantation consists of a mastoidectomy procedure with insertion of the internal coil and attached electrodes (Figure 1). Under general anesthesia, a wide postauricular incision is made. Using a special butterfly drill bit, a circular depression is made 2-3 mm. deep in the squamous portion of the temporal bone as a seat for the internal coil (Figure 2). Then, a mastoidectomy is carried out, including special bonework to develop an opening through the posterior portion of the bony ear canal into the middle ear space. The internal coil is sutured into position (Figure 3). The ground electrode is passed through the middle ear into the Eustachian tube. Then, the 20 mm. long, 0.008 mm. in diameter, platinum

active electrode is guided through a small opening in the round window leading into a hollow passage of the basal turn of the cochlea, known as the scala tympani. With the device properly positioned, the postauricular incision is closed. Average operating time is two to three hours; postoperative care and recovery is typical of that for a mastoidectomy, about two days hospitalization. The internal coil in position is shown radiographically in Figure 4.

The internal coil and electrodes are not activated without being coupled to the external portion of the device. As seen in Figure 5, the external device consists of a microphone, external stimulator and external coil mounted on eyeglass frames. Sound is picked up by the microphone and changed into electrical energy. The electrical energy is amplified by the stimulator box and mixed or modulated with a 16,000 Hertz carrier signal. The modulated electrical signal is delivered to the external coil, placed directly over the implanted coil. Through magnetic coupling, the signal is delivered to the internal coil and electrodes. A monopolar field of electrical stimulation is then created between the active and the ground electrode; this electrical field stimulates the auditory nerve. The implant thus emulates the function of the cochlear hair cells (Figure 6).

As coinvestigators, we have implanted four patients in the last two years. This number indi-



Figure 1.

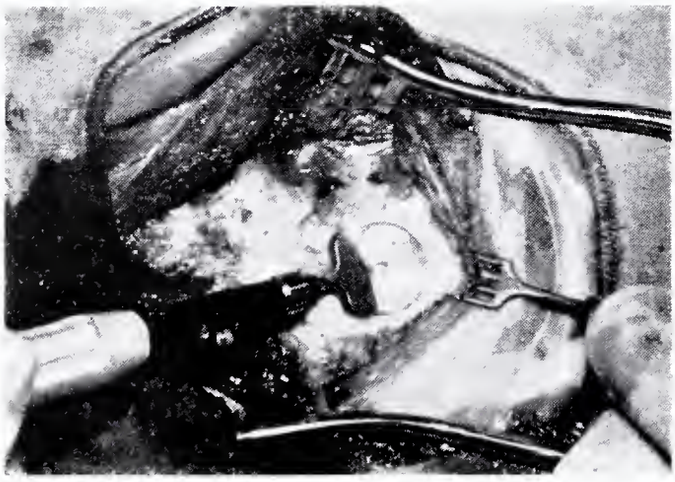


Figure 2.



Figure 3.



Figure 4.

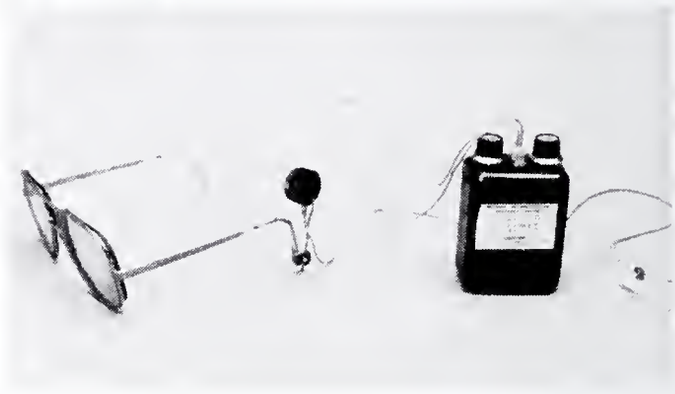


Figure 5.

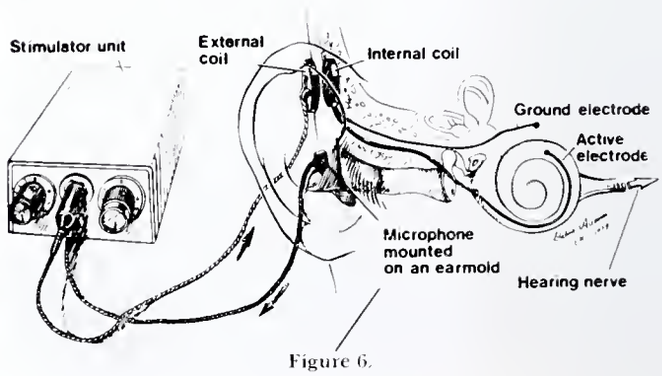


Figure 6.

cates the highly conservative approach taken in accepting patients for the implant. Patients include a 45-year-old woman with a history of congenital lues, a 54-year-old man with a history of progressive loss from Meniere's Disease, and two young men in their 20's, both with history of total loss following meningitis. These patients have not experienced any complications as a result of their implants.

When patients who have had normal hearing at one time, but subsequently have lost their hearing, are asked what they hear, they relate that many environmental sounds seem natural, while others seem similar, although not exactly as they remembered them to be. As for speech, patients relate that voices have a voice-like quality, but words are not distinct. Thus at present, the implant supplies a primitive level of hearing, recoupling patients to their environment, by relating them to surrounding events. It also provides a signal level of hearing, supplying sounds from sources which may not be visible, for safety and warning purposes. Patients hear the telephone and doorbell ring, they hear footsteps and car motors approaching from behind. As for hearing on the symbolic level, that is, the ability to understand the spoken word, there is little true speech discrimination with the implant at its current stage. However, the ability to lip read is usually greatly improved when patients have auditory cues to add to visual cues. Patients are able to distinguish and recognize familiar voices. They are also able to greatly improve the quality of their own voices when they are able to hear and monitor pitch, intensity and pronunciation of speech. When using the device, some patients receive relief from tinnitus or head noise. Most importantly, the sounds which are received through the implant result in improved emotional well-being as a result of reducing feelings of isolation and depression caused by total deafness. Increased social interaction strengthens interpersonal relationships, and self images improve as a result of improved ability to communicate with others. These comments are based not only upon our observations, but also upon evaluations by clinical psychologists.

However, none of these benefits come automatically. Patients go through an intensive rehabilitation program following surgery, in order to learn how to use the new auditory signals which they receive. Therapy includes teaching identification of the new sounds heard, increasing lipreading skills by combining visual and auditory signals, practicing monitoring and regulation of the voice, and teaching special strategies in communication, including the use of a telephone. Therapy may take three months to a year, depending on the patient's needs. Thus, an enormous time commitment is necessary from the patient, as well as the audiologist and speech pathologist who direct the rehabilitation program.

As for the future, the ultimate goal is to design a cochlear implant which would allow the ability to distinguish and understand the words of speech. Speech scientists are at work analyzing the key elements in speech which allow us to recognize and differentiate phonetic sounds. Electronics engineers are working to miniaturize the device and improve the quality of signal output, with the use of new electronic developments such as microchips and digital processing. In addition, devices with multiple electrodes are being designed and have already been implanted by Dr. House in a few special research patients. It may be that multiple electrode arrays will be necessary to accurately reproduce the complexity of speech signals; however, these systems are not yet clinically applicable, as the external activators and processors are not wearable. Currently, researchers at the Universities of California, Utah, Washington, and Stanford are studying electrode array design, signal processing and transmission, as well as histological and physiological effects of implantation. Coinvestigators in Denver are implanting very young primates to assess effects of implantation on normal development.

Other goals for the future include the amassing of more hours of patient use. With this experience, careful psychological studies will be conducted to assess any neurological, cognitive or emotional changes associated with the use of the cochlear implant. To date, any changes noted have been positive changes in emotional stability and cognitive functioning. Once the device has been improved so that it can produce a more accurate signal representative of the original auditory stimulus, then, of course, the ultimate goal is implantation of persons born deaf. Once progress has been made in accurate sound transmission, it is the hope of all coinvestigators working together on this project, that we will be able to implant persons born deaf and prevent many of the social, psychological and communicative difficulties resulting from total sound deprivation.

ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 103)

HISTORY: M. C. is a 50-year-old lady once followed for mitral stenosis and aortic stenosis. She was lost to follow-up for several years in another state and recently reappeared with a scar on her chest but without her medical records. Among other things, a chest film shows prosthetic aortic and mitral valves. The ECG is shown here.

Along lines of pacing systems, what do you think about the type of pacemaker and lead system most likely present?



CARDIOGRAPHICS 9270-0475

John W. Watson, M.D.
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EDITORIAL

Medical Science — The American Crucible

Wally Thomas, M.D.

I saw America today! Born, reared, and educated in the so-called "Baptist Bible Belt" of the South, I have through the "Great Depression", World War II, the "Integration Crises" of the 50s and the following decades, the devisiveness of Vietnam, and the increasing tensions of today's inflation, economic "recession", military crises, political chaos and local as well as international terrorism, witnessed racism, "reverse racism", bigotry, intolerance, prejudice, loss of national pride and global pessimism. On this same day in which I am privileged to participate in the greatness of America, news media around the world carry horrifying accounts of political mass murder in El Salvador, rioting and machine gunning in Moslem religious shrines in Israel, war in Iran, South American lerment, European bickering and Russia's worldwide communistic assault on human decency, while one of my boyhood next-door neighbors was only recently murdered by barbaric assassins in Guatemala.

But here, today, in this same Southland in a Southern Medical Center one sees much more than physical well-being and health restored. I came here as a patient. My personally chosen surgeon is an Egyptian, born, reared and educated in Egypt. I was referred to a diagnostic center built by the Jewish community and in the process of "evaluation" I am peered at, gouged, stuck, x-rayed, questioned, physically examined and "evaluated" by physicians from Turkey, Japan, Egypt and America. A Filipino x-ray technician not yet born when I clambered over the heaving side of a troopship on a rope net to participate in "liberating" his home island during World War II, chats about the beauty of his homeland now, a generation later. A technician from Iran, black Americans, Hispanics, Chinese and Vietnamese, as well as American Caucasians all participate in the process of "health care". My surgery is done in a Christian operated hospital. A polyglot of languages is heard in the hotels, on the streets and in the corridors. My Arab physician asks knowledgeable questions about my "Old Testament" Bible readings.

When I left my practice in the black buckshot mud of the Arkansas Delta to come here lor treatment, I left it in the capable hands ol a colleague who is a native of Indonesia, whose wife is Taiwanese, both having been educated in Canada. As I eat lunch, I watch fascinated, as black skinned Americans, bronzed Mexicans, yellow Orientals, brown Indians and blonde Caucasians all nonchalantly dine together. The only fight here is one in which all join against the common enemy of human suffering, illness, injury, disease and despair.

With all our bitterly divided factions, gangs, "special interest groups", criminal mobs, self-seeking Congressional members and lobbyists, and gronp as well as personal greed, surely there must be something to be learned from this small crucible of Americanism.

Wake up America, before it is everlastingly too late!

Post Office Box 250, Dermott, Arkansas 71638.

Medicine and the Environment

Alfred Kahn, Jr., M.D.

One of the big problems in current medical practice is gun barrel vision concerning overall patient care. The patient's interaction with his environment is of paramount importance in many ways—but how many medical histories indicate any concrete facts about the patient's style and type of work. For example, if he is a farmer what is his exposure to dusts, weed killers, and fertilizers; what is his exposure to electrical hazards as a rice farmer with pumps or a dairy farmer with electric milk equipment. Does the farmer needlessly expose himself to mechanical hazards as a tractor without a rollover bar. Improper regard for environmental hazards can kill as quickly and unexpectedly as a sudden myocardial infarction. Patients who are exposed to dangerous occupations should be counselled to avoid undue fatigue, unnecessary exposures, and careless occupational habits.

Much is currently being written about the automobile and clear air. This subject is more of a political issue in some respects than a public health issue. The main point of discussion here revolves around exhaust fumes. First of all to improve compression ratios and to thus increase the efficiency of gasoline engines, tetraethyl lead was added to gasoline; it prevented detonation—a foe of maximally efficient combustion. The point that seems to be apparent here is that there is no sound medical basis for the removal of all tetraethyl lead from gasoline. It is perfectly true that the lead level in human bodies has increased in modern times—but no one has really proved that this is injurious except in overt cases of lead poisoning as seen in painters, people dealing with old batteries, children chewing painted toys and furniture, etc. The question thus seems to be whether or not a small amount of tetraethyl lead in gasoline would not have benefits that outweigh its remotely possible ill effects. The insistence on virtually impossibly low carbon monoxide, hydrocarbons, and nitrous wastes in the exhausts of automobiles is likewise not well documented. These latter substances do cause air pollution in certain environmental situations as heavy traffic areas like the Eastern seaboard between Boston and Washington—and Los Angeles. However, the removal of virtually all of these wastes as in 1982 emission laws is probably far too stringent. Studies have not clearly indicated a need for this type of universal emission law throughout the U.S.A. The emission laws in Europe are getting more stringent but not to the extent of those in the U.S.A. Relaxation of the emission laws would save gasoline by permitting more efficient engines without sacrificing the welfare of the public. This is not a recommendation for a loosening of the laws pertaining to smokestack emissions or water pollution. With regard to the latter, there is a significant pollution problem which affects certain people, and certain localities—and perhaps the public in general. For example, smog is definitely injurious to patients with chronic lung disease—as the Sonora, Pennsylvania episode. The so-called Love Canal episode in which chemicals were dumped into a canal and rendered nearby homes unusable. These are the extremes but no one knows what carcinogens are in water, air, foods, etc. However, from a practical point of view the less exposure from massive chemical assaults the better—until more definitive knowledge is obtained.

Man's interaction with his environment can be beneficial as well as deleterious. Statistics indicate but do not prove that sedentary living predisposes to a shortened life span—as compared to a physically active life style. In short, individuals who are tilted toward athletics in childhood—and who keep up these athletic interests are more likely to stay healthy than their less active friends. In schools, the mottos ought to be more playing fields—fewer stadiums—universal participation in athletics is a worthwhile goal. Perhaps more emphasis should be placed on individual sports that can be participated in through the years as golf (without carts) and tennis. Hiking and canoeing are popular pastimes in Arkansas—and the environment readily permits this. Arkansas offers some mountain climbing—but it is deficient in winter sports due to the climate. Ice skating, downhill skiing, and cross country skiing are outdoor sports which can be kept up through the later years of life. Cross country skiing is par-

ticularly adapted to participation by older people—it's a vigorous sport, comparatively inexpensive, and readily adaptable to people with little or no previous skiing experience.

Ultimately, physicians should look at a patient in terms of his total environment and total health needs. Gun barrel vision in any health evaluation is bound to lead to serious oversights. Physicians should be leaders in environmental studies which have to do with health problems.

"From Other Years"*

Journal of the State Medical Society of Arkansas

Vol. 3 No. 2 August, 1892 p. 67-68

REPORT OF THE BOARD OF VISITORS TO THE MEDICAL DEPARTMENT OF THE ARKANSAS INDUSTRIAL UNIVERSITY

Mr. President and Gentlemen—As chairman of your Board of Visitors to the Medical Department of the Arkansas Industrial University, I beg leave to report as follows:

I found the "Medical Department" occupying quite a pretty brick building, erected specially for the purpose of teaching medicine. The lecture hall and amphitheater are sufficiently roomy for the size of the present classes.

Clinical material, the faculty tell me, is in abundance, coming, of course, almost entirely from among the negroes. Dr. J. A. Dibrell says he has seen as many as an hundred patients at the dispensary on a single morning. This at once removes the objection so often made to medical teaching in cities no larger than Little Rock, *i. e.*, insufficient material for clinical teaching.

I was glad to find that our school has followed the lead of the better class of medical colleges east. They have supplied each branch with its quiz master, and while didactic lectures are not cast aside, yet the student has not now as formerly to depend entirely upon them for information; his memory is continually jogged, and many times during a course is he reminded of matters that he formerly heard but once. Quizzes, clinics and didactic lectures are the order of the day in Arkansas as well as in New York.

The class has been larger this year than ever before, the attendance being 111, and coming mainly from our State, though some from adjoining States.

I attended the examinations and was pleasantly surprised to find the average quite high, many being exceedingly well prepared. The examinations were as careful and critical as you would find anywhere, and the class of replies were creditable to both students and faculty.

My visit to the Medical College has produced a decided change in my estimation of the capabilities and probabilities of medical teaching in our State. In this school we will find more assistance in raising the standard of medical education than in all the laws we have ever had enacted. Yes, than all we can now expect to have enacted for the next ten years.

I think this Society should in every way in its power assist this effort; let us send here our students, and recommend it to persons desiring advice about when to take lectures.

I have nothing but words of commendation for the efforts of the faculty, and to persons who wish to have their eyes opened in regard to the earnest, practical and successful character of this work, I can only advise them to visit the institution and listen to the examinations.

And now, Mr. President, I would say in closing, that it is the duty of this Society to put gentlemen on this committee who will attend to its duties, and not those who take so little interest in this matter that they find no time for it.

J. L. GOREE, M.D.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

TOTAL JOINT REPLACEMENT

Presented by Robert Kleinhenz, M.D., Orthopaedic Surgeon, *August 3, 12:00 Noon,* Red Room of St. Joseph's Regional Health Center, Hot Springs. One hour Category 1 credit. No registration fee.

EVALUATION OF THE PATIENT WITH LUNG DISEASE

Presented by Roger C. Bone, M.D., Professor of Medicine, Chief of Pulmonary Division, UAMS, *August 17, 7:00 P.M.*, In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category 1 credit. No registration fee.

CATARACTS – SOMETHING OLD, SOMETHING NEW

Presented by Fay Boozman, M.D., *August 17, 7:30 P.M. to 8:30 P.M.*, Bella Vista Lodge, Bella Vista. One hour Category 1 credit. No registration fee. Sponsored by AHEC-NW.

TWO DAYS OF INTERNAL MEDICINE

Presented by George Ackerman, M.D., *September 3rd and 4th,* Shorey Auditorium, UAMS. Hours of credit and registration fee unknown at this time.

CALCIUM ANTAGONIST

Presented by Ira Martin Grais, M.D., Assistant Professor of Clinical Medicine, Northwestern University Medical School, Chicago, *September 7, 12:00 Noon,* Red Room, St. Joseph's Regional Health Center, Hot Springs. One hour Category 1 credit. No registration fee.

PSYCHIATRY UPDATE, 1982

Presented by Robert R. Matthews, M.D., and Jerry Blaylock, M.D., *September 10th through 12th.* Time, place, hours of credit and registration fee unknown at this time.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I Credit.

EL DORADO — AHEC-SOUTH Arkansas

Surgical Conference, each Monday, 12:45 P.M., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 P.M. to 1:30 P.M., AHEC-South Arkansas.
Medical Journal Club Conference, third Tuesday, 12:45 P.M. to 1:30 P.M., AHEC-South Arkansas.
Internal Medicine Conference, first, second, and fourth Wednesday, 12:45 P.M. to 1:30 P.M., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:45 P.M. to 1:30 P.M., Warner Brown Hospital.
Obstetrics-Gynecology Conference, each Thursday, 12:45 P.M. to 1:30 P.M., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 P.M. to 1:30 P.M., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, first and third Saturday, 7:30 A.M. to 8:30 A.M., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Radiology Conference, August 5, 19, and September 2, 16, 1:00 P.M., Conference Room.
Pathology Conference, August 17 and September 21, 3:00 P.M., Conference Room.
Mortality Conference, August 12 and September 9, 3:00 P.M., Conference Room.

FORT SMITH — AHEC

Cancer Conference, each Tuesday, 12:00 Noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-Northwest

Interesting Case Conference, second and fourth Tuesday, 12:00 Noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 P.M., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 P.M., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 P.M., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 Noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 Noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 Noon, St. Bernard's Dietary Conference Room.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 Noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 A.M., Physician's Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 Noon, Physician's Conference Room.
Problem Case Conference, each Thursday, 12:00 Noon, Physician's Conference Room.
Primary Care Seminar, second and fourth Thursday, 5:30 P.M., Second Floor Conference Room, Pediatric Administrative Building.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 Noon to 1:00 P.M., Auditorium.
Radiology Conference, each Wednesday, 1:30 P.M. to 5:30 P.M., Radiology Department.
Cardiopulmonary Resuscitation Course, second Wednesday, 7:00 P.M. to 1:00 A.M., Auditorium, Six hours Category I credit.
GI Roundup, third Wednesday, 12:00 Noon to 1:00 P.M., Conference Room #1.
Emergency Medicine Conference, first Wednesday, 12:30 P.M. to 1:30 P.M., Conference Room #1.
Case of the Month, second Wednesday, 12:00 Noon to 1:00 P.M., Conference Room #1.
Cardiology Conference, second Wednesday, 5:00 P.M. to 6:00 P.M., Conference Room #1.
Morbidity and Mortality Conference, September 2, 8:00 A.M. to 9:00 A.M., Conference Room #1.
Anxiety/Stress Conference, last Wednesday, 12:00 Noon to 1:00 P.M., Conference Room #1.
Surgery Conference, each Thursday except first Thursday, 8:00 A.M. to 9:00 A.M., Conference Room #1. AUGUST MEETINGS CANCELLED.
Anesthesiology Conference, third Thursday, 7:00 A.M. to 8:00 A.M., Dining Room #3.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 P.M. to 7:30 P.M., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 P.M. to 1:30 P.M., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 P.M. to 6:30 P.M., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 P.M. to 6:30 P.M. CANCELLED FOR JULY AND AUGUST.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 P.M. to 7:00 P.M. CANCELLED FOR JULY AND AUGUST.
Neuropathology Conference, third Tuesday, 5:00 P.M. to 6:00 P.M. CANCELLED FOR JULY AND AUGUST.
Pulmonary Conference, first and third Thursday, 12:00 Noon to 1:00 P.M., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 Noon to 1:00 P.M. CANCELLED FOR JULY AND AUGUST.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Internal Medicine Grand Rounds, each Thursday, 8:00 A.M. to 9:00 A.M., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 A.M. to 10:00 A.M., Education 11 Building, Room G 131 A&B.

TEXARKANA — AHEC SOUTHWEST

AHEC Tumor Conference, first Wednesday, 7:00 A.M., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 P.M., St. Michael Hospital.

THINGS TO COME

September 13-16

1982 Annual Meeting United States Section International College of Surgeons. Resorts International Hotel, Atlantic City, New Jersey. For further information, contact Mrs. Sally Cox, Coordinator of Continuing Medical Education, 1516 North Lake Shore Drive, Chicago, Illinois 60610; phone (312) 787-0004.

October 1-2

Eleventh Annual Symposium, Postgraduate Course — Western Division, American Geriatrics Society. "Quality of Life: Quality of Care" Hour-for-hour AMA Category 1. Registration fee: $100 U. S. Funds. For further information, contact the Western Division of the American Geriatrics Society, 13220 North 105th Avenue, Room 12, Sun City, Arizona 85351.



PERSONAL AND NEWS ITEMS

DIABETES SPEAKER

Dr. Phil Peters spoke at a recent meeting of the Central Arkansas Chapter of the American Diabetes Association.

DR. ROBERTS CONDUCTS PROGRAM

Dr. David Roberts of Mountain Home discussed "Nuclear Cardiology" at a recent continuing medical education program at Baxter General Hospital.

DR. SHOCK HONORED

Dr. John P. Shock, Jr., of Little Rock, was chosen as the 1982 "Alumnus of the Year" by Glenville State College of Glenville, West Virginia. Dr. Shock is chairman of the Department of Ophthalmology at the University of Arkansas College of Medicine.

DR. DICKEY ATTENDS REUNION

Dr. A. B. Dickey of Walnut Ridge recently attended a fiftieth year reunion of his University of Virginia School of Medicine graduating class. He also attended the annual meeting of the Virginia Medical Society.

DR. THOMPSON CHAIRMAN

Dr. A. J. Thompson of Little Rock served as chairman of the annual meeting and scientific session of the Arkansas Affiliate of the American Heart Association held recently in Little Rock.

DR. RANEY SPEAKS

Dr. Bascom P. Raney of Jonesboro was the guest speaker for the Walnut Ridge High School commencement.

DR. SMITH APPOINTED

Dr. V. B. Smith, Jr., of Marked Tree has been appointed Health Officer for Poinsett County.

DR. DENNIS HONORED

Dr. James L. Dennis has been named "Outstanding Physician of the Year" by the Oklahoma College of Medicine Alumni Association. Dr. Dennis is Professor Emeritus in the Department of Pediatrics at the University of Arkansas College of Medicine and formerly served as Chancellor of the University of Arkansas for Medical Sciences.

DR. DELUCA LOCATES

Dr. Russ Deluca, a Family Physician, has moved to Corning.

DR. DUCKWORTH SELECTED

Dr. H. R. Duckworth of Piggott is the new Clay County Health Officer.

DR. HENDERSON SPEAKS

Dr. O. Lee Henderson of Benton discussed motor development and treatment of physically handicapped children at a recent meeting of parents of pre-school children enrolled in the home program of the Benton County Sunshine School.

DR. GILLER FEATURED SPEAKER

Dr. W. John Giller of El Dorado was the featured speaker at a local workshop on market accessibility for the handicapped.

DR. STAHL RUNS

Dr. Ray Stahl of Mountain Home was a member of the team of runners from Baxter General Hospital participating in the third running of the Lifemark Cup in Houston, Texas.

DR. AHMED DIPLOMAT

Dr. S. A. Ahmed of Waldron has been confirmed as a Diplomat of the American Board of Surgery.

DR. WEAVER RETURNS

Dr. Donald Weaver, formerly of Gentry, has returned to the State after practicing in Riverside, California, for a year. Dr. Weaver has joined Dr. Neil D. Mullins at the Bentonville Family Practice Clinic.

DR. RUSSELL

Dr. Jerry Russell has joined Dr. William F. Dudding in the practice of Family Medicine at Fort Smith.

BATES HOSPITAL

Bates Hospital in Bentonville recently celebrated its 40th anniversary. Dr. Neil Compton, a retired physician who was associated with the hospital for thirty years, spoke at an anniversary ceremony on the past accomplishments and future goals of the hospital.

DR. McNAIR APPOINTED

Dr. James McNair of Little Rock will head the Governor's Council on Physical Fitness and Sports. The Council will encourage local governments to emphasize the importance of physical fitness and sports participation.

DR. RUNYAN SPEAKS

Dr. W. A. Runyan of Little Rock recently addressed a meeting of the Central Arkansas Chapter of the American Association for Medical Transcription.

HEART ASSOCIATION OFFICERS

Dr. Marvin L. Murphy has succeeded Dr. J. Campbell Gilliland as president of the Arkansas Affiliate of the American Heart Association. Dr. A. J. Thompson is president-elect. Physicians serving as board members are Dr. Ben Saltzman, Dr. Larry Weathers, Dr. James Kane, and Dr. Anthony Bennett.

DR. WOOLLAM IS SPEAKER

Dr. Chris Woollam recently addressed the Forrest City Kiwanis Club on high blood pressure and preventive medicine.

DR. DUNCAN ELECTED

Dr. Philip E. Duncan of Fayetteville has been elected president of the Arkansas Thoracic Society.



NEW MEMBERS

DR. F. DAVID CHAMBERS

Dr. Chambers is a new member of the Bradley County Medical Society. He was born in Drew County.

In 1976, Dr. Chambers received a B.S. degree in Chemistry from the University of Arkansas at Monticello. He was graduated in 1980 from the University of Arkansas College of Medicine. His internship was with the Medical Center.

Dr. Chambers is a General Practitioner. His office is at 219 East Central in Warren.

DR. ROGER L. CAGLE

Dr. Cagle was born in Jonesboro and attended Arkansas State University in that town. He received a Bachelor of Science degree in Zoology in 1974.

After graduation from the University of Arkansas College of Medicine in 1978, Dr. Cagle served a Family Practice residency at John Peter Smith Hospital in Fort Worth. He is certified by the American Board of Family Practice.

Dr. Cagle practices at #1 Medical Drive in Paragould and at Rector. He has been in practice for a year and a half. He is a member through the Greene-Clay County Medical Society.

DR. SCOTT HUSTED

Dr. Husted has recently affiliated with the Society through Mississippi County. He is a native of Arkadelphia and attended Henderson State College, receiving a Bachelor of Science in Biology in 1973.

In 1977, Dr. Husted was graduated from the University of Arkansas College of Medicine. He completed a residency in Pathology at the University Medical Center.

Dr. Husted is board certified in Anatomic and Clinical Pathology and is in the private practice of Pathology at Chickasawba Hospital in Blytheville.

DR. GARY W. VILLINES

The Tri-County Medical Society has added Dr. Villines to its membership roll.

Dr. Villines is a native of Fort Smith. He attended Hendrix College for his pre-medical education.

Dr. Villines was graduated from the University of Arkansas College of Medicine in 1975. He interned at the University Medical Center and Baptist Medical Center under the flexible program.

Dr. Villines practices Family Medicine at the Medical Center Clinic in Calico Rock. He has practiced there since 1976.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The ECG shows two sets of pacemaker artifacts. One set generates P-waves and the second set generates QRS complexes in synchrony with P-waves. The "PR interval" of the generated PQRS complexes is 0.16 sec., representing the time between the atrial and ventricular artifacts. A RBBB pattern is noted, suggesting the possible presence of an epicardial ventricular lead. Thus, one might guess that an elegant pacemaker and lead system is present with the patient probably having an AV synchronous or AV sequential pacemaker with both atrial and ventricular leads.

OBITUARY

DR. FRANK E. GAVLAS

Dr. Gavlas of Dardanelle died June 2nd; he was born September 12, 1889, in Wilkes-Barre, Pennsylvania.

Dr. Gavlas received his pre-med education at the University of Maryland; he was graduated from the Kansas City College of Medicine and Surgery, Missouri, in 1917. Before moving to Dardanelle, Dr. Gavlas practiced in Bridgeport, Connecticut, from 1917 to 1941 and in North Little Rock from 1941 to 1942.

Dr. Gavlas was a member of the Fifty Year Club of the Arkansas Medical Society and a past president of the Dardanelle Rotary Club.

He is survived by his wife, Rose Hyland Gavlas, his son, Dr. Frank J. Gavlas of West Virginia, and two daughters.

DR. JAMES D. KINLEY

Dr. Kinley of Beebe died May 23, 1982. He was born September 16, 1904.

Dr. Kinley was graduated from the University of Arkansas College of Medicine in 1932 and began practice in Beebe in 1933. He had retired from the practice of medicine in 1970.

Dr. Kinley was a member of the Fifty Year Club of the Arkansas Medical Society and a Mason.

Dr. Kinley is survived by his wife, Mrs. Mary Eleanor Garrett Kinley, his son, Dr. J. Garrett Kinley, and one daughter.

DR. WARREN S. RILEY

Dr. Warren S. Riley of El Dorado died June 7, 1982. He was born August 7, 1904.

Dr. Riley was a graduate of Ouachita Baptist University and a 1930 graduate of the University of Arkansas College of Medicine. His post-graduate work was with Municipal Hospital in Washington.

Dr. Riley had practiced in El Dorado since 1946. He was a member of the original staff for the Union Medical Center. Dr. Riley was a former chief of staff at Warner-Brown Hospital, a member of the staff at South Arkansas Regional Health Center, a former member of the State Board of Health, and a former health officer for El Dorado and Union County. He was a veteran of World War II.

Dr. Riley is survived by his wife, Wilma (Billie) Smith Riley and one son.

RESOLUTIONS



DR. RUTH C. STEINKAMP

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the death of an esteemed member, Ruth C. Steinkamp, M.D., and

WHEREAS, Dr. Steinkamp was nationally recognized in her specialty of internal medicine for her outstanding contributions in the area of nutrition; and

WHEREAS, she had earned a reputation of greatest accomplishment in her efforts toward the control of cervical cancer; and

WHEREAS, she was an invaluable member of this Society, serving at the time of her death as a member of the Executive Committee and as a Delegate to the Arkansas Medical Society.

BE IT THEREFORE RESOLVED:

THAT, this resolution be made a part of the permanent archives of this Society; and

THAT, a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication; and

THAT, a copy of this resolution be sent to Dr. Steinkamp's family as an expression of our heartfelt sympathy.

By Order of the Memorials Committee
Pulaski County Medical Society
H. Elvin Shuffield, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M. D.

August, 1982

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 79 No. 3

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Pinworms work the night shift



Artist's interpretation:
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SCIENTIFIC ARTICLES

Carotid Endarterectomy — Five-Year Follow-Up 105
W. Ray Jouett, M.D., and Coburn S. Howell, M.D.

Changes in the Practice of Medicine in Arkansas Since Nineteen Twenty-Five 107
William P. Scarlett, M.D.

Simple Closure Versus Definitive Surgical Treatment of the Perforated Peptic Ulcer 110
Joseph K. Buchman, M.D.

FEATURES

ECG of the Month 112
John W. Watson, M.D.

Editorial: "Evoked Potentials in Clinical Medicine" 113
Alfred Kahn, Jr., M.D.

From Other Years 114

Medicine in the News 115

Keeping Up 119

Obituary 120

Things to Come 122

Resolutions 122

New Members 123

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Carotid Endarterectomy — Five-Year Follow-Up

Ray Jouett, M.D.,* and Coburn Howell, M.D.**

As has been pointed out in many articles dealing with vascular disease, stroke is the third cause of death in the United States.[3] Stroke is exceeded only by heart disease and some form of cancer. Estimates report that approximately 350,000 Americans suffer a new stroke each year, and approximately a third of those with acute thrombotic stroke die within 30 days of the onset. Approximately 200,000 people in the United States die yearly from vascular disease.[4]

Carotid endarterectomy has become a more common procedure since the national cooperative study on cerebral vascular disease demonstrated its usefulness in certain types of patients that had strokes and transient ischemic attacks.[2] Also, the technical advancement of arteriograms and the emergence of non-invasive methods for evaluating extracranial vascular disease have all contributed to a large number of patients being screened.

The social and economical effect of cerebral vascular disease is enormous and incalculable. This causes pressure from the medical community. The effort from the medical community has been both surgical and medical. It is technically possible to increase cerebral blood flow or remove the source of embolic disease and monitor the process with sophisticated equipment. The efficacy of this approach needs to be documented.

With this in mind, we analyzed 100 cases from 1970 to 1975 that had endarterectomy. We wanted to see if patients who were at risk had been removed from a stroke threat during this five-year period.

METHOD:

Our files provided 100 cases of consecutive carotid endarterectomy between 1970 and 1975. These people were at risk, having had a TIA or a mild stroke that fell within the category of a surgical problem. We reviewed the records, with special attention to more central nervous system vascular complaints. A questionnaire was designed to specifically analyze vascular events and was mailed to all of the 100 patients. In special circumstances, telephone calls were made to the patients. Personal communication with the patients' family doctors was utilized and found to be very informative.

RESULTS:

We received 71 total responses. There were 37 males (52 percent) and 34 females (48 percent). From this group, we performed 78 carotid endarterectomies. Of the 71 reporting, 16 patients (23 percent) had died. Three had died of stroke involving the opposite hemisphere from the previous surgery. One patient died from a basilar type stroke.

Seven had died of myocardial infarction or congestive heart failure. One patient died of carcinoma of the rectum. One patient died of a brain tumor, glioblastoma multiforme. Three patients died of unknown causes. However, on questioning the physicians involved, and the families, we felt that the deaths had not been of cerebral vascular origin.

Three percent of the patients suffered strokes on the same side that had been previously operated. This happened five and six years postoperatively. All had made substantial recovery but continued to have some hemiparesis of the involved extremities.

Four patients stated they had experienced a TIA, or what they considered was a TIA. Three occurred in the opposite hemisphere from the previous surgery, and one on the same side as the surgery. None of these patients had neurological deficit longer than 24 hours. All of these patients were operated in 1970. All, likewise, revealed evidence of arterial disease not thought to be clinically or hemodynamically significant involving the opposite vessel.

The patient that died of stroke involving the opposite hemisphere also had arterial disease present in other vessels. It was felt that since this

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was not a hemodynamically involved vessel and no ulcerative lesion was present, surgery was not recommended.

COMMENT:

Several studies have all pointed out that an average of 30 to 40 per cent of people who present with a TIA are at risk for a frank stroke within a three to five-year period. In a Mayo Clinic study, 160 patients were observed for three to eight years, during which time 51 of them, or 32 percent, developed cerebral infarctions. Eighteen of these, or 51 percent, died of their stroke, and seven others developed cerebral hemorrhage.

Thompson estimates that 75 percent of patients with ischemic stroke syndrome have at least one obstructed lesion that is at a surgically accessible site, in that more than 40 percent have the principal occlusive or involved vessel confined to the extracranial vasculature, primarily the cervical region.[5]

In a recent article by Busuttil, et al, concluded the incidence of stroke and hemodynamically significant lesion after operation was one in 51, or 1.9 percent. The incidence of recurrent TIAs in the operated group was nine of 51, or 17.6 per cent. They concluded that patients with hemodynamically significant stenosis treated non-operatively have a greater risk of cerebral vascular death, stroke and TIA, than patients treated with carotid endarterectomy.[1]

All of the patients in this series had sustained a transient ischemic attack, or some manner of neurological disturbance such as stroke prior to surgery. If the standard statistics of 30 percent having additional stroke within a five-year period would hold, then 21 of the patients of the 71 reported would have been at risk for a cerebral vascular accident.

In evaluating the patients in 1970 that died of a stroke in the opposite hemisphere, possibly the approach was not as aggressive then as it would be now. The surgical technique has not changed enough over the five-year period to make any significant difference.

CONCLUSION:

These patients were followed for an average of 5.52 years. Sixteen (23 percent), have died of unrelated cerebral vascular disease. Four died of vascular disease with involvement of the opposite carotid, or at least the opposite hemisphere. With this information, plus developing transient ischemic attacks in the opposite carotid, it would appear that this is, indeed, a procedure that is effective for the prevention of stroke, and it would appear that one needs to be aggressive in approaching this disease.

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Changes in the Practice of Medicine in Arkansas Since 1925

Wm. P. Scarlett, M.D.*

Back in 1925 we had many poorly trained doctors practicing medicine in Arkansas. For instance, there were nine in my hometown of Russellville, most of whom had only two years of study in the Arkansas Medical School in Little Rock. In Pottsville there were three M.D.'s, in Atkins—four, in Dover—three, and in London—two. Prior to 1900, all a young man had to do to become an M.D. was to read Medicine and ride with an M.D. to learn how to dispense drugs to sick folks. The drugs they used were acetylsalicelic acid, paragoric, morphine, laudinum and epsom salts. They took a glass half full of water and added the drug in each glass and told the patient or Mother to give every three or four hours.

About 1916 the Arkansas Legislature and Governor decided that we needed more doctors to practice medicine in the rural areas of Arkansas, so they made M.D.'s out of pharmacists with the understanding that they were to practice in the rural areas. The trouble was, the law did not say how long they were to practice in the country. So most of them moved to towns.

Common diseases in 1925 were pneumonia, malaria, typhoid, diphtheria, polio and in children, measles, mumps, whooping cough and scarlet fever. We had shots to prevent typhoid and diphtheria and vaccination. The trouble was that many parents did not have their children take the shots. We had numerous rural children to have diphtheria and had to do trachiotomies—place a metal tube in their trachea to enable them to breathe and save their lives. We also had a few cases of typhoid fever in adults and we had a few deaths since we had no drug to cure typhoid fever cases.

The reason we continued to have typhoid fever cases in 1925, etc. was there were still surface privies in towns and the rural areas. The wells were either dug or bored and not protected against surface contamination. For instance, I was made Health Officer of the town of Mt. Nebo and had all the well and spring water tested by the State Board of Health Laboratory in Little Rock. Most of the samples of water tested came back contaminated so we closed the springs and had the wells protected against surface contamination. They still had surface privies on Mt. Nebo.

Later on the Federal Government provided money for each county to build pit privies for each rural home. They dug pits and placed concrete slabs over the pit with a "one holer" seat for use by the family. This reduced the incidence of typhoid fever to zero.

A great many of the old family doctors back in 1925 gave their patients shots of morphine while in pain from a fractured leg or after surgery. In this way they made morphine addicts out of many patients. We tried hard to help several addicts break the habit.

Lobar pneumonia was rather common back in the early years of this century. Most cases of fractured hip were placed in bed on their back with their legs in a plaster of paris cast for weeks and most of them developed static pneumonia and died. Today orthopedic surgeons operate on the patients and get them out of bed in a few days.

Back in 1935-36, I took a graduate course in Public Health Administration at Harvard University in Boston. While there my wife and I became aquainted with a young woman M.D. from India by the name of Pundit. Her uncle, Dr. Pundit, an ophthalmologist who had done hundreds of cataract operations and did not even put his patients to bed. He came to the United States to teach our surgeons his method of removing cataracts. One young ophthalmologist, Dr. Ellis Gardner of my hometown Russellville, went all the way to India to study under Dr. Pundit.

SURGERY

Surgery back in the twenties was rather crude. The main type of surgery done in our hospital at Russellville, Arkansas, was for acute and chronic appendicitis, some of whom had ruptured appendices and required drainage for weeks. The surgeons removed gall bladders and pus tubes in women while a few uteri were also removed. The

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ear, nose and throat specialists removed tonsils and adenoids, lanced eardrums to drain pus in acute otiles media and in some cases did mastoid surgery. There were a few urologists that removed kidney stones and dead kidneys. In gangrene of the toes and feet, surgeons did amputations and I fear that some amputations were done on diabetic patients with gangrene.

The first surgery done on the heart was during World War I, upon a soldier who had been shot in the lower thick ventrical part of his heart which was seen early and sewed up successfully.

Now surgeons do all manner of operations on the heart, repairing and putting in new valves, transplanting the arteries and a few new hearts have been installed. Wonderful lifesaving surgery is done on the blood vessels. In cases of aneurysms, the surgeons remove the aneurysms and insert plastic tubing. I have several friends who are still living after having aneurysms removed. Back in 1928, I took a graduate course in medicine at Tulane Medical School in New Orleans and saw a negro man with a large aneurysm of his transverse aorta. He had had it so long and it was so large that it had beat the ribs away on the left side of his chest and you could see his heart beat through the mass pressing up against the skin of his left chest. The only treatment for aneurysms back then was to insert silver wire to help form a clot and prevent the aneurysm from rupturing. It is also remarkable the type of surgery done transplanting long blood vessels around clots in arteries in the legs.

Breast removals in women with cancer of the breast is rather common now.

A remarkable thing they do in hospitals today is to keep patients alive with kidneys that have stopped functioning by giving them kidney dialysis three times a week to remove the toxic urine.

Ophthalmologists do hundreds of cataract removals now and insert plastic lenses. Back in the early part of this century when a cataract was removed, the patient was placed in bed on their back with sand bags on each side of their head to prevent them from turning their head for ten days. Now no sand bags are used on the patient and they go home after two or three days.

THE DIFFERENCE IN THE NUMBER AND TYPES OF M.D. SPECIALISTS IN LITTLE ROCK IN 1925 AND 1981

When I started to practice medicine in 1925 there was only one urology surgeon, Dr. H. Fay Jones in Little Rock, who removed stones from one of my brother's kidneys and later removed the dead left kidney. There were eye, ear, nose and throat specialists and gynecology and obstetricians but no orthopedic surgeons. There was one lung specialist who treated tuberculosis by putting his patients to bed but had them get up and ride the train to Little Rock to take tuberculin shots.

The telephone directory of Little Rock and North Little Rock under Physicians in 1981, gives the names of forty one (41) types of specialists in Little Rock and North Little Rock with a total of seven hundred and seventy-four doctors. Boy, what an increase in the number and types of specialists in fifty six years.

M.D. SPECIALISTS

1.	Adolescent	1
2.	Allergy	8
3.	Anesthesiology	15
4.	Arthritis & Rheumatology	5
5.	Heart	38
6.	Cardiovascular Surgery	17
7.	Colon & Rectal Surgery	3
8.	Dermatology	11
9.	Internal Secretion Glands	5
10.	Family Practice	64
11.	Stomach & Intestines	16
12.	General Practice	31
13.	Preventive Medicine	1
14.	General Surgery	46
15.	Geriatrics	2
16.	Gynecology	56
17.	Head & Neck Surgery	2
18.	Hematology, Blood, Oncology	16
19.	Infectious Diseases	3
20.	Diagnosticians	59
21.	Throat	2
22.	Nephrology, Kidneys	9
23.	Neurological Surgery	12
24.	Neurology	11
25.	Obstetrics	31
26.	Obstetrics, Gynecology	51
27.	Occupational Medicine	2
28.	Opthalmology, Eye	43
29.	Orthopedic Surgery	68
30.	Ear, Otology	14
31.	Ear, Nose & Throat	12
32.	Pathology	13
33.	Pediatric Surgery	1
34.	Pediatrics	22
35.	Plastic Surgery	12

36.	Psychiatry	17
37.	Psychiatry, Child	10
38.	Pulmonary Diseases	22
39.	Xray	39
40.	Thoracic, Chest	19
41.	Urology	15
	TOTAL	774

COMPARING HOSPITALS IN ARKANSAS IN EARLY 1900 AND 1981

Most small towns in Arkansas either did not have hospitals or had them in large vacant homes. The first hospital in Russellville, Arkansas, was built by Dr. Berryman about 1912. It was a long narrow one-story brick veneer building with sixteen rooms. This was later replaced by a two-story brick building built by a surgeon, Dr. R. L. Smith, who sold bonds to his patients to finance it. An early Victor X-ray machine was installed and a laboratory for simple blood and urine tests was installed. His hospital served Russellville and the surrounding counties for many years. All charity cases were cared for by Dr. Smith and staff, there was no Blue Cross-Blue Shield or Medicare, Medicaid back then and no one carried hospital and health insurance back in those days, so we doctors did about as much or more charity as pay cases during the depression. Now, in 1981, every town and even small rural areas have well equipped hospitals and staffs of M.D.'s.

In Little Rock, back in the early years of 1900, the chief hospitals were St. Vincents, Baptist and the State mental hospital. In 1924, the Missouri Pacific Hospital was built by the Missouri Pacific employees. It was a moderate six-story brick building with all modern equipment available. I did my internship in this new hospital under a surgeon by the name of Dr. Smith and his staff.

Now in Little Rock and North Little Rock in 1981, there are listed in the phone directory the following new, modern hospitals:

St. Vincents Infirmary	606 beds
Cost for Private Room	$120.00
Semi-Private	$114.00
Baptist Medical Center	587 beds
Cost for Private Room	$123.00
Semi-Private	$108.00
Doctor's Hospital	235 beds
Cost for Private Room	$120.00
Semi-Private	$109.00
Arkansas Mental Hospital	386 beds
Ark. University Medical School Hospital	306 beds
Cost for Private Room	$150.00
Semi-Private	$120.00
Riverview Hospital (formerly Missouri Pacific Hospital)	203 beds
Veterans Hospital on Roosevelt Road	268 beds
Arkansas Childrens Hospital	92 beds
Central Arkansas General Hospital	116 beds

A large group of doctors first organized and built a new office building, then later built a new hospital next door, called the Doctors Building and Doctors Hospital.

	338 beds
Cost for Private Room	$120.00
Semi-Private	$109.00

The Baptist had a nice brick hospital in the heart of Little Rock when they built a modern hospital on the edge of Little Rock just off of the turnpike which they are now adding three stories to. They also built a building adjoining it. Three other office buildings have been built surrounding the hospital for doctors.

In 1930 St. Vincent's Hospital charged $4.00 per day for a bed.



Simple Closure Versus Definitive Surgical Treatment of the Perforated Peptic Ulcer

Joseph K. Buchman, M.D.*

Perforation is a very serious complication of peptic ulcer disease; and the associated morbidity and mortality are typically matched by the tachycardia of the emergency surgeon physician. The patient usually complains of sudden onset of severe epigastric pain which is constant and spreads throughout the abdomen. Nausea and vomiting are infrequent, as is back pain, but shoulder pain may be noted if the inflammation involves the diaphragm. The severity of the pain may lessen shortly after its onset, but this lull is only temporary. A history of ulcer symptoms may be obtained, and the symptoms may have been worsening in the few days prior to admission. Physical examination reveals prostration and all the signs of peritonitis.

However, atypical presentations are frequent and may be due to early self-sealing (forme fruste perforation), deflection of the spillage by the falciform ligament to the right paracolic gutter and cecal fossa, or perforation into the lesser sac. The differential diagnosis includes several other possibilities including colon perforations because of instrumentation, diverticular disease, or obstruction and distention. Perforation of an inflammed appendix is rarely responsible for free air under the diaphragm, as is a perforated Meckel's diverticulum containing gastric mucosa (complications of ectopic gastric mucosa decrease as the patient's age increases). However, rupture of the distal esophagus may present with free air under the diaphragm, and steroid ulcers present usually with free air but with quite atypical histories and physical findings.

Once the perforation has occurred, the morbidity and mortality that follows is greatly influenced by the duration and volume of the leak, and its composition. The peritoneum has a tremendous capacity for absorption of these fluids, thereby accounting for the lull period, but the presence of foreign material (e.g., undigested food) and/or bile maximizes the morbidity and mortality. The effect of pancreatic enzymes has not been determined. After 6 to 12 hours, oral and intestinal microflora convert the chemical peritonitis to bacterial peritonitis.

Once fluid resuscitation and antibiotics have been initiated, some authors recommend investigation with water-soluble contrast to determine if the leak has sealed. If the ulcer is identified and there is no extravasation of contrast, they may recommend non-operative therapy. But this prevents treatment of the intermittently leaking perforation as well as evacuation of bile and foreign material from the abdomen.

Surgical therapy can be divided into two schools of thought. Through the influence of Dr. Graham, simple closure of the perforation with application of an omental patch has been used widely in the United States. Better pre- and post-operative care and the use of antibiotics improved the immediate mortality and undoubtedly bolstered the reputation of simple closure. Recently, immediate mortality rates of 0 to 3% have been reported by some authors, and up to 11% by other authors, depending on the patient population. However, follow-up of these patients has resulted in significant dissatisfaction with the long-term results. Table I demonstrates that in several series of patients treated with simple closure, one-half or more experienced recurrent ulcer symptoms, and 9 to 30% of these patients suffered further complications of peptic ulcer disease, specifically bleeding, re-perforation, or obstruction.

TABLE I
FOLLOW-UP OF PATIENTS TREATED WITH SIMPLE CLOSURE

	Mortality	*Recurrent Symptoms*	*Recurrent Complications*	*Re-operated*	*Total*
Griffin	6.5%	86%	9%	32%	122
Skovgaard			9%	77%	156
Cassell	5.5%			36%	224
Jordan	10.5%	73%	30.1%	34.5%	306
Playforth		48%	10%	40%	132
Drury		52%			50

The alternative to simple closure is definitive surgery as the initial procedure. It is clear that the patient who is a poor operative risk should have the most expedient procedure, simple closure; and the patient on steroid therapy does not require an ulcer-curing operation, therefore, simple closure should suffice. The presence of diffuse, severe peritonitis usually places the patient in the poor risk category, and simple closure

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is indicated. In an effort to determine which patients would benefit from immediate definitive surgery, several parameters have been studied. Age, sex, and race have all been investigated, but none have been reliable. Several authors have suggested that the duration of ulcer symptoms prior to the perforation be used as a guide to identify the patient with a high risk of recurrent symptoms and/or need for re-operation. Table II divides patients with perforations treated by simple closure into those with symptoms for less than three months and those with symptoms for more than three months. Those with symptoms for more than three months have a twofold or more higher risk of unsatisfactory results.

TABLE II
DURATION OF ULCER SYMPTOMS IN PATIENTS TREATED WITH SIMPLE CLOSURE (LESS THAN 3 MOS./GREATER THAN 3 MOS.)

	Recurrent Symptoms	*Reoperated*	*Total*
Skovgaard		12%/87%	4/107
McDonough	22%/53%		54/66
Burdette	32%/68%		
Cassell		14%/43.5%	70/154

But will a definitive procedure decrease the incidence of recurrent symptoms and re-operation? Cassell reported that only 4% of 50 patients required further surgery. Jordan, et al, reported on a 24 year experience during which their treatment evolved from simple closure to immediate gastrectomy to hemigastrectomy and vagotomy. The recurrent ulcer rate was 16% of 25 patients following a Billroth I, 5% of 119 patients following a Billroth II, and none of 53 patients following hemigastrectomy and vagotomy. Seventy three percent of 63 patients experienced a recurrent ulcer following simple closure. Tables III and IV further support the use of immediate definitive surgery. Following a Billroth I or II, 64% experienced "excellent" results, while 79% did the same following hemigastrectomy and vagotomy. "Poor" results referred to those patients with a proven or suspected marginal ulcer or in whom postgastrectomy symptoms interfered with normal daily activities.

TABLE III
LATE RESULTS FOLLOWING GASTRECTOMY

Result	*No. of Patients*	*Per Cent*
Excellent	93	63.9
Good	33	22.9
Poor	19	13.2
TOTAL	144	100.0

TABLE IV
LATE RESULTS FOLLOWING HEMIGASTRECTOMY AND VAGOTOMY

Result	*No. of Patients*	*Per Cent*
Excellent	42	79.1
Good	6	11.5
Poor	5	9.4
TOTAL	53	100.0

To date, no one procedure has demonstrated superiority in the immediate treatment of perforated peptic ulcers. Virtually all procedures, from vagotomy and pyloroplasty to parietal cell vagotomy, have been used with success.

Thus, it is proposed that simple closure be used when the patient is a poor medical risk, when the patient is on steroid therapy, in the presence of purulent peritonitis and/or abscess, and if the history of ulcer symptoms is less than three months. A patient who has had symptoms for greater than three months should be considered for an immediate definitive procedure, especially if there is a history of hemorrhage, obstruction, or prior perforation. "Expectant" therapy (nasogastric suction with medical support) is usually reserved for the patient too ill to survive surgery.

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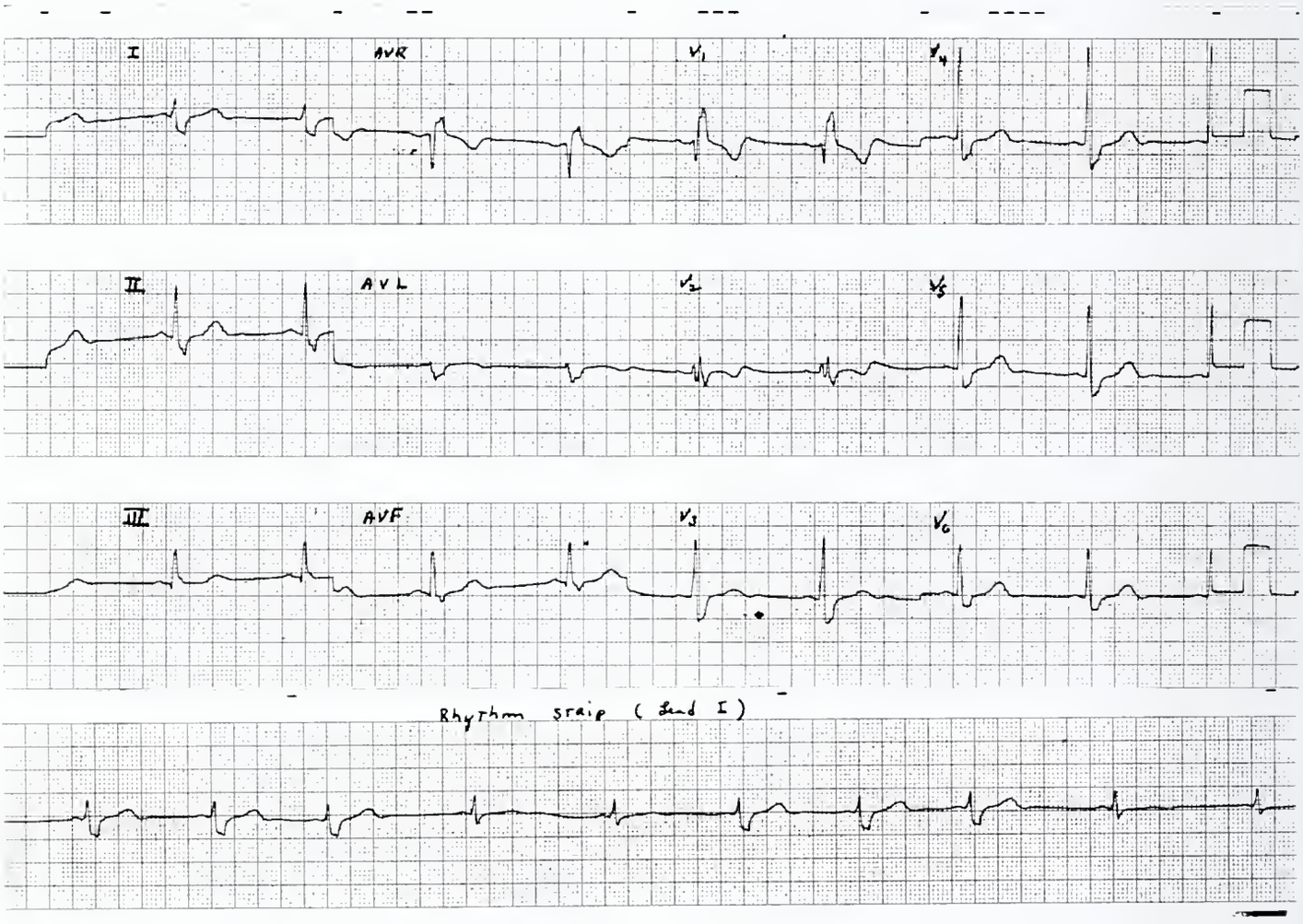
ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 124)

HISTORY: C. J. is a 23-year-old woman who jogs six miles daily. She noted a slow pulse rate and requested an electrocardiogram, shown below. On physical examination, she was noted to have a slow and slightly irregular pulse rate plus wide but nonfixed splitting of her second heart sound.

What is your electrocardiographic diagnosis?



John W. Watson, M.D.
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EDITORIAL

Evoked Potentials in Clinical Medicine

Alfred Kahn, Jr., M.D.

Of particular interest in the *New England Journal of Medicine* is an article on evoked potentials in clinical medicine by K. H. Chiappa and A. H. Ropper (*New England Journal of Medicine*, Volume 306, Page 1140, May 13, 1982). An evoked potential is defined by the authors as "an electrical manifestation of the brain's response to an external stimulus". They cite the fact that if a person sees some type of light or object, an electrical impulse can be recorded over the occipital region of the head — provided the electrical impulse can be separated from what might be termed, background activity. Since these electrical waves are produced by a specific anatomic region, evaluation of these electrical waves can give an insight into the region itself and the connection of this region with other parts of the nervous system. Sometimes the stimulus is followed by multiple waves and these are said to represent different parts of the brain. Students of this technique look for the presence of evoked potential and the time it takes for the stimulus to evoke the potential "or potentials". The authors state that the technique of using evoked potential is a reproductive laboratory technique and is helpful in the diagnosis of neurologic disorders—they mention among other things multiple sclerosis, tumors, trauma, strokes, hysteria, etc. Chiappa and Ropper describe pattern shift visual evoked response; they describe how to perform the test and the interpretation. They state that this technique is valuable in multiple sclerosis, especially in some individuals who had no ophthalmologic abnormalities. They state that "the diagnosis of optic neuritis is highly unlikely if the pattern shift visual evoked potential is normal". On the other hand, silent optic neuritis representing part of the multiple sclerosis clinical pattern can be diagnosed using evoked potential when other methods do not give a clue. It seems apparent from the authors' discussion that demyelinating diseases change the pattern shift visual evoked potential. However, other disorders also cause abnormal pattern shift evoked potential—and the authors mention such things as tropical amblyopia, alcohol amblyopia, tobacco amblyopia. An abnormal result may also be brought on in the presence of optic neuropathy brought on by lack of blood supply to the optic nerve. Tumors are said to change the pattern shift visual evoked potential. Chiappa and Ropper state that diseases other than primary vision disorders may be associated with abnormal pattern shift visual evoked potential including Friedreich's ataxia, chorea, pernicious anemia, renal disease, Parkinson's disease, etc.

Another type of evoked potential is the brain stem auditory evoked potential in which the subject is stimulated with a click which is followed by a reaction along the eighth nerve and in the interpretive area which sounds reach. A brief auditory stimulus is usually followed by a sequence of waves as the stimulant reaches the specific area of the brain. Brain stem auditory evoked potential and the interpretation is reviewed in this article by Chiappa and Ropper. They state that "the neural elements that sequentially generate auditory waves include the cochlea, spiral ganglion, eighth nerve, cochlear nucleus, superior olivary nucleus, lateral lemniscus, inferior colliculus and the medial geniculate body". The authors state that brain stem auditory evoked potentials are often abnormal despite the presence of normal hearing—and point the way to the diagnosis of disease entities. Some of the disorders discussed by Chiappa and Ropper in their review of brain stem auditory evoked potential include acoustic neuromas and multiple sclerosis. They make the statement that "high dosages of anes-

thetic agents and barbituates do not seriously alter the brain stem auditory evoked potential even when the electroencephalogram is isoelectric". If a comatose patient does not show a brain stem evoked potential, that patient is likely to die. Whereas, comatose patients who continue to show brain stem auditory evoked potential are more likely to recover statistically.

Chiappa and Ropper also described short-latency somatosensory evoked potentials. This technique is said to allow localization of conduction defects. Again, the authors describe the technique of performing this type of evoked potential. From a clinical point of view, Chiappa and Ropper state that short-latency somatosensory evoked potentials are helpful in diagnosing peripheral nerve, root and spinal cord disease. This type of study is helpful in cervical spondylosis. It is also helpful in multiple sclerosis. Certain types of diabetic nervous system disorders can be detected by these structures as can Friedreich's ataxia. The authors state that certain vascular lesions of the brain do not alter this type of evoked potential. They also state that short-latency somatosensory evoked potentials are helpful in monitoring comatose patients – as they do not seem to be changed much by medication used in the therapy of the comatose patients. They mention some interesting use of this type of evoked potential – namely, that "short-latency somatosensory evoked potentials recorded at the scalp after lower limb stimulus can be used to monitor spinal cord function during surgical procedures involving manipulation of the cord".

This is a fascinating, rapidly developing area of electro-physiology.

"From Other Years"*

Journal of the State Medical Society of Arkansas
2:460-1, April, 1892

COUNTY SOCIETIES

(The Scientific Proceedings of County Societies are requested for publication this Department.)

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Southwest Arkansas Medical Association.

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The Southwest Arkansas Medical Association met at Hope on Monday, April 4th, at 2:30, Dr. E. R. Armistead presiding. The following members were present: Drs. H. L. B'Shen Fulton; J. R. Autrey, Columbus; E. R. Armistead, Prescott; G. H. Andrews, H. J. F. Garrett, T. J. Garner, T. A. McLarty, L. J. Gillespie and R. M. Wilson, Hope.

Owing to the protracted spell of inclement weather, it was deemed advisable not to hold a two days' meeting, as was expected.

Drs. J. R. Dale, the president, and F. R. Fleming of Arkadelphia, failed to arrive until Tuesday, on account of the belated cannon ball. Drs. J. M. Carrigan and T. H. Baird, of Washington, A. L. Purdom of Ozan, and J. L. Bell of Eleyville, came down and returned home, thinking there would be no meeting, as the rain was falling in torrents. Drs. W. B. Palmer of Rock Creek, and W. S. Watson of Kirby, got as far as Prescott, but could get no train.

Dr. E. R. Armistead read an article on "Congestive Fevers." The paper was a most excellent dissertation on a patent subject. It exhibited a clear conception of the etyology and treatment of that disease, and showed much research and forethought of the author in preparing it. After discussing it, it was referred to the committee on publication.

Owing to the limited time for the meeting, two other good papers were deferred being read.

The following officers were elected for the ensuing year: President, E. R. Amistead, Prescott; first vice president, F. R. Fleming, Arkadelphia; second vice president, J. R. Autrey, Columbus; secretary, R. M. Wilson, Hope; treasurer, H. J. F. Garrett.

Hope was selected, being the most accessible point, as the next place of meeting, to be held Monday, July 4, 1892. It is earnestly requested that all members be present at this meeting. We now have a membership of thirty-five physicians, limited to sonthwest Arkansas. Some excellent papers have already been assured, among them

one on conjunctivitis, by F. R. Fleming; malarial haematuria, by W. M. Moore, Hollywood; five cases in practice, J. R. Dale; rectal diseases, J. Brown, Texarkana.

We heartily welcome other physicians who wish to join us, and would urge all to be present who feel an interest in organized medicine, those who would keep abreast of the profession and in the van of professional progress and ethics.

R. M. Wilson, *Secretary.*

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

At the end of the month the Senate and House were in deep debate on the budget for next fiscal year. The outcome will determine the size and scope of the federal health effort.

The stakes in the debate are high—the size of the federal deficit; the issue of modifying the scheduled tax cuts; adjustments in Social Security benefits; and the congressional budget process, itself.

The Senate bill, approved by the Senate Budget Committee on a party-line vote and endorsed by President Reagan, calls for $95 billion in additional taxes over the next three years, a freeze on most domestic spending and a smaller increase in Defense spending than originally sought by the Administration. The most controversial provision is for an unspecified savings of $10 billion in Social Security benefits.

The House Budget Committee bill, also adopted by a party vote, would leave Social Security benefits intact and provide for higher domestic spending levels.

The Senate bill would cut Medicaid benefits by $700 million next fiscal year, compared with only $59 million in the House bill. The Senate Medicare reduction was $5.1 billion, almost $3 billion more than the House measure provides.

* * * *

The Federal Trade Commission's asserted jurisdiction over the professions, including medicine, would be stripped from it under a bill approved by the Senate Commerce Committee.

The Committee action, on a 10-5 vote, was a triumph for the American Medical Association and other professional groups that have been challenging the FTC's seven-year campaign against health and other professional associations.

The Supreme Court earlier this year failed to resolve the jurisdictional question in a tie, 4-4 vote on the landmark FTC case against the AMA's code of ethics governing advertising by physicians. As a result, the FTC's strictures against the AMA were left standing.

The AMA and other professions have argued that the FTC was established to police business activities, not those of the learned professions which are governed by state regulations.

The Commerce Committee action came after a heated debate on an amendment by Sen. Ted Stevens (R-AK) to a bill reauthorizing the FTC for three years. Addressing his fellow committee members and before a crowded hearing room, Stevens said the FTC had not asserted any jurisdiction against the professions until 1975, after which "there has been considerable controversy."

The Committee should assure that the states can continue their traditional role of regulating the professions and the professions should be given the opportunity to discipline themselves, Stevens said. He noted that the Justice Department would continue to have powers to employ the antitrust statutes against the professions.

"The issue is the increasing extension of the federal bureaucracy into our daily lives," asserted Stevens. "Why should the FTC remove from the

states the burden of being responsive to change?" he asked. If the present FTC course continues, the Senator said, "in the end you will have federal standardization of the professions."

The opposition to Stevens' amendment was led by Committee Chairman Bob Packwood (R-OR). "Professional associations are honest and decent but as they see it often isn't the way the public sees it," Packwood said. He contended that state medical and bar associations are "hardly ever" regulated by the states.

Sen. Robert Kasten (R-WI), Chairman of the Committee's Subcommittee on the Consumer which handled the FTC legislation, said he supported the Stevens proposal because the FTC over the past few years "has directly overridden state regulatory programs." The agency, he said, "has gone beyond the general guidelines of what we would like to have from it."

Voting for the amendment were Sens. Stevens, Kasten, Barry Goldwater (R-AZ), Harrison Schmitt (R-NM), Larry Pressler (R-SD), Ernest Hollings (D-SC), Daniel Inouye (D-HI), Wendell Ford (D-KY), James Exon (D-NE), and Howell Heflin (D-AL).

In opposition were Sens. Packwood, Slade Gorton (R-WA), Nancy Kassenbaum (R-KS), Howard Cannon (D-NV) and Donald Riegle (D-MI).

A few days before the Senate Committee vote, the AMA and seven other professional organizations had sent a telegram to President Reagan urging support for their position against FTC jurisdiction, since this would be "consistent with your goals of reducing federal regulation, restoring power to the states and relying more on private sector responsibility."

"This is a matter of major importance to all professional groups, and we are concerned that this Administration appears to be unresponsive" the telegram concluded.

Signing were the AMA, the American Dental Association, the American Optometric Association, the American Veterinary Medical Association, the National Society of Professional Engineers, the American Institute of Architects, the American Consulting Engineers Council, and the American Society of Civil Engineers.

The House Commerce Committee is expected to take up the questions of FTC reauthorization and jurisdiction soon. There is a strong drive in the House behind a measure (H.R. 3722) by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC's actions against the professions. Almost 200 House members have co-sponsored the bill.

The Stevens amendment before the Senate Committee was patterned after legislation (S. 1984) introduced by Sens. James McClure (R-ID) and John Melcher (D-MT), two leading Senate proponents of restricting the FTC's scope over the professions.

The legislation is given a good chance of clearing Congress if opponents do not succeed in keeping it from floor votes in House and Senate.

* * * *

The House Commerce Committee has formally adopted a proposal to place federal health planning into a block grant to the states, stripping most centralized control from the controversial program.

The action came on an amendment by Reps. Richard Shelby (D-AL) and Edward Madigan (R-IL) over the initial opposition of Rep. Henry Waxman (D-CA), chairman of the health subcommittee.

The program would be kept alive for two more years with funding of $64 million next fiscal year. However, the nature of the program would be changed significantly with the states and localities given a much freer hand and many current restrictions lifted.

The certificate-of-need (CON) requirements in present law would be liberalized greatly, with the CON for capital expenditures put at $5 million in comparison with the present $600,000. The CON for institutional health services would be set at $1 million.

Strongly opposed by the AMA, the planning program which is up for reauthorization this year, has been a target of the Reagan Administration which wants to phase it out.

The Senate Labor and Human Resources Committee on a tie vote last month blocked a proposal to continue and revise the planning program.

* * * *

The government has reported progress in collecting overdue school loans from health professionals and announced new steps to improve collection and prevent abuses.

As a result of a crackdown on overdue loans, 80 physicians employed by the Health and Human Services (HHS) Department were discovered to be delinquent and notified they will be disciplined unless payments are brought up-to-date immediately. A review by HHS Inspector General Richard Kusserow also found 83 delinquent phy-

sicians associated with medical schools.

Kusserow said six medical schools have increased collections by almost 250 percent. More than $5 million in delinquent loans could be erased within one year at that rate, Kusserow said.

The review revealed $30.6 million in delinquent loans with more than $5 million owed by physicians.

New regulations will establish new delinquency rate ceilings for schools and penalties for exceeding the ceilings. The Public Health Service Student Financial Aid guidelines are being revised to require schools to go to court to recover loans if necessary.

Sen. Charles Percy (R-IL) has introduced legislation that would allow the Internal Revenue Service to release current addresses of delinquent borrowers to the schools holding the loans.

* * * *

The Social Security Administration has proposed new medical standards to be used in evaluating disability claims.

The slightly tighter medical standards, published recently in the Federal Register for 60-day comment, are not related to the more rigorous standards announced last year for the disability program as a whole. Significant reductions to the number of beneficiaries is expected under the program.

The revisions on the Listing of Impairments reflect advances in medical treatment and diagnosis and Social Security's experience in evaluating claims. They are not based on any changes in the law.

Of the 13 body systems in the Listing, changes are proposed in all but two—skin disorders and genito-urinary.

Significant changes are recommended for: respiratory, musculoskeletal, cardiovascular, digestive, hemic and lymphatic, neurological and neoplastic. Less significant are changes for special senses and speech and the multiple body systems listing. Minor changes are proposed for mental disorders and endocrine systems.

Slight changes also are proposed for the Listing of Impairments used in evaluating children under age 18 for Supplemental Security Income disability claims. The changes are for musculoskeletal, special senses and speech, genito-urinary, mental and emotional disorders, and neoplastic disease.

* * * *

The AMA has expressed its support for the basic goals of legislation to encourage the development of drugs for rare diseases, but called for specific changes that would "allay the concerns of practicing physicians."

The AMA, in a letter to Rep. Henry Waxman (D-CA), chairman of the House Commerce Health Subcommittee and sponsor of the bill, said that legislation was needed to solve the problem of developing and producing the so-called "orphan drugs" that are financial losers for their manufacturers.

The legislation (H.R. 5238) would amend the Food, Drug and Cosmetic Act to make drugs available on a limited basis for treatment of rare diseases even though the drug was still being tested. It also would provide the manufacturer with seven years of exclusive marketing even if the drugs could not be patented, and establish an interagency on orphan drugs. The legislation would amend the Internal Revenue Code to provide a tax credit to those who develop drugs for rare diseases.

* * * *

The Administration is considering legislative proposals to make Health Maintenance Organizations (HMOs) more competitive. Frank Seubold, PhD, Director of the HMO office, said a major question to be decided is whether separate legislation should be sought or whether to place the HMO law amendments with the overall pro-competition bill.

The HHS Department is working on a number of changes, Seubolt said, but he stressed that none of them yet have reached the stage of final adoption as departmental policy by HHS Secretary Richard Schweiker.

Among the types of changes under scrutiny at HHS are proposals to give HMOs a free hand in charging members for services on top of the prepaid fee. At present, HMOs are limited to a nominal extra charge. In addition, staff people are considering dropping or easing the requirements for mental health and substance abuse services by HMOs. Another change designed to make HMOs more competitive with indemnity insurance would be to allow the organizations to vary their membership charges among their members, taking into account age, health status, etc.

Although the Administration wants to chop the HMO loan program to a bare minimum, officials say they still wish to encourage private development of the plans.

* * * *

Administration-proposed economies in the

childhood immunization program could prove "costly and cruel," an official of the American Academy of Pediatrics has warned the Senate.

Vincent Fulginiti, M.D., Chairman of the Academy's Committee on Infectious Diseases, also criticized "sensationalized medical accounts of vaccine side-effects" that show evidence of frightening parents about pertussis vaccination.

Dr. Fulginiti told a Senate Labor and Human Resources Subcommittee that the delivery of vaccines to children "would be reduced to intolerably low levels" if there is no increase in the $28.8 million sought by the Administration for the immunization program next fiscal year. The seven-percent cut imposed on the program this year comes at a time when the cost of vaccine has increased 44 percent over the past two years, he said.

"Based on past experience, these cuts proposed by the Administration would prove terribly costly and cruel—costly in direct dollar terms to all of our citizens for many years to come, and cruel to the unfortunate victims and their families for a lifetime." said Dr. Fulginiti.

The danger was disputed by William Foege, M.D., Director of the Centers for Disease Control (CDC), who said the immunization program has become more efficient and the backlog of immunizations has been eliminated, making it possible to reduce costs. Dr. Foege also said he has been assured by HHS Secretary Richard Schweiker that the immunization program will be carefully monitored for adverse effects.

* * * *

HHS Department has sent notices to all hospitals warning that loss of federal Medicare and Medicaid payments could result from denial of treatment to the handicapped.

The letter was a result of the publicized "Infant Doe" case in Indiana where a deformed baby was allowed to die.

HHS Secretary Schweiker said "the President has instructed me to make absolutely clear to health providers in this nation that federal law does not allow medical discrimination against handicapped infants."

The letter said in part that "a recipient may not lawfully decline to treat an operable life threatening condition in an infant, or refrain from feeding the infant, simply because the infant is believed to be mentally retarded."

* * * *

Nine years after its historic decision limiting states' rights to outlaw abortion, the Supreme Court has agreed to review restrictive statutes in three states.

Both pro-abortion and anti-abortion forces said they hoped the Court's ultimate decision—not likely until late this year or next year—will bolster their causes. The Supreme Court is considered more conservative today than it was in 1973 when it held 7-2 that states could not prohibit abortions during the first trimester of pregnancy.

However, none of the three cases before the Court—from Virginia, Ohio and Missouri—appeared to pose a head-on challenge to the earlier ruling that touched off the national controversy that continues to rage.

* * * *

FIFTY YEAR CLUB MAKES PRESENTATION

The Fifty-Year Club of the Arkansas Medical Society recently purchased a book for the History of Medicine Collection at the University of Arkansas for Medical Sciences. The Club is composed of physicians who have practiced medicine for fifty years or more. The group decided to provide a book for the History of Medicine Collection as its project for the past year.

The book presented was authored by William Hey (1736-1819), an English surgeon. It was written in 1803 and is titled "Practical Observations in Surgery, Illustrated with Cases." In his book, he described Hey's saw which he found more convenient in operations on the skull than a trephine; he described Hey's amputation; Hey's internal derangement of the knee joint; and he gave a detailed account of strangulated hernia and described that part of the falciform edge of the saphenous opening which he called the femoral ligament but which is called today Hey's ligament.

Hey was instrumental in founding the Leeds General Infirmary in 1767 and in the Infirmary was the spirit of the surgical era in England for forty-five years. He is best known for his description of internal derangement of the knee joint which he first observed in 1782.

The book is a first edition and contains ten illustrative plates. It has been beautifully rebound by a fine binder. This classic book is a valuable addition to the History of Medicine collection.

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

TWO DAYS OF INTERNAL MEDICINE

Presented by George Ackerman, M.D., *September 3rd, 8:00 a.m. to 5:00 p.m.; September 4th, 8:00 a.m. to 3:00 p.m.,* Shorey Auditorium, UAMS. Eleven hours Category I credit.

CALCIUM ANTAGONIST

Presented by Ira Martin Grais, M.D., Assistant Professor of Clinical Medicine, Northwestern University Medical School, Chicago, *September 7, 12:00 noon,* Red Room, St. Joseph's Regional Health Center, Hot Springs. One hour Category I credit. No registration fee.

PSYCHIATRY UPDATE

Presented by Robert R. Matthews, M.D., and Jerry Blaylock, M.D., *September 10th through 12th,* Fairfield Bay. Time, hours of credit, and registration fee unknown at this time.

ANTIFUNGAL THERAPY, INITIAL ANTIMICROBIAL THERAPY FOR LIFE THREATENING INFECTIONS, ANAEROBIC INFECTIONS

September 11, 8:00 a.m. to 12:30 p.m., Auditorium, Baptist Medical Center. Four hours Category I credit. No registration fee.

FALL MEETING OF THE ARKANSAS ACADEMY OF OPHTHALMOLOGY

September 17 and 18, 9:00 a.m. to 12:00 noon both days, Red Apple Inn, Heber Springs. Six hours Category I credit. Registration fee $50. For further information contact James Landers, M.D., 500 South University, Little Rock, Arkansas 72205, (501) 664-1104.

VIRAL HEPATITIS UPDATE

Presented by Colin E. Atterbury, M.D., Associate Professor of Medicine, Yale University School of Medicine, *September 21, 7:00 p.m.,* Baxter General Hospital In-Service Education Building, Mountain Home. Two hours Category I credit. No registration fee.

NUTRITIONAL SEMINAR

October 8th through 10th, DeGray Lodge State Park. Sponsored by UAMS. Time, hours of credit and fees unknown.

SEMINAR ON PRACTICAL COUNSELING TECHNIQUES FOR THE PRIMARY PHYSICIAN

Presented by John C. Faul, M.D., *October 20 and 21, 7:00 p.m. to 9:00 p.m.,* Baxter General Hospital, In-Service Education Building, Mountain Home. Four hours Category I credit. No registration fee.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, each Monday, 12:45 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, third Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second, and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:45 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, each Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-Northwest

Medicine Teaching Conference, first and third Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FORT SMITH — AHEC

Cancer Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL
Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Infections Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, September 2, 16, 30 and October 14, 28, 5:30 p.m., Second Floor Conference Room, Pediatric Administrative Building.

LITTLE ROCK — BAPTIST MEDICAL CENTER
Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Radiology Conference, each Tuesday, 4:30 p.m. to 5:30 p.m., Radiology Department.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Auditorium. Six hours Category I credit.
GI Roundup, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Cardiology Conference, third Wednesday, 5:00 p.m. to 6:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, September 2 and October 7, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anxiety/Stress Conference, last Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Surgery Conference, each Thursday except first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Dining Room #3.

LITTLE ROCK — ST. VINCENT INFIRMARY
Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., St. Vincent Infirmary in September; Doctors Hospital in October.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S-1169 Laboratory.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Conference Room #1.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education 11 Building, Room G/131 A&B.

TEXARKANA — AHEC-Southwest
AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.

OBITUARY

DR. JOHN W. COLE

Dr. John W. Cole of Malvern died June 17, 1982. He was born March 2, 1909, in Prattsville.

Dr. Cole was a graduate of Ouachita College in Arkadelphia and a 1937 graduate of the University of Arkansas College of Medicine. His internship was with City Memorial Hospital in Winston-Salem, North Carolina.

Dr. Cole served for eighteen years as a member of the State Board of Education. He was the company doctor for Reynolds Metal Company in Jones Mills, a life member of the Arkansas Medical Society and a 32nd degree Mason.

Dr. Cole is survived by his wife, Grace Cole, his daughter, Dr. Robin Glass of Arkadelphia, another daughter and two sons.



PERSONAL AND NEWS ITEMS

EUREKA SPRINGS PHYSICIANS

Eureka Springs has three new physicians — Dr. John Ursin, Dr. Trung H. Nguyen, and Dr. Richard Liong.

DR. GILL

Dr. James Gill of Fort Smith has been selected for fellowship in the American College of Radiology.

DR. DUNCAN PRESIDENT

Dr. Philip E. Duncan of Fayetteville is the new president of the Arkansas Thoracic Society.

FORT SMITH PHYSICIANS RECOGNIZED

The Fort Smith Area Health Education Center has recognized four physicians for their work with family practice residents, senior medical students and paramedical personnel.

Dr. John Pope was presented the "Know Thyself Award"; Dr. Louis Poole was given the "Good Samaritan Award"; Dr. W. C. Holmes received the "Caring Physician Award"; and Dr. L. Ford Barnes received the "Golden Apple Award."

FORREST CITY GAINS DOCTORS

Two doctors have recently opened an Obstetrics-Gynecology practice in Forrest City — Dr. James P. DeRossitt, a native of Forrest City, and Dr. Charles L. Barker from Readyville, Tennessee.

DR. SKAUG SPEAKS

Dr. Warren A. Skaug of Jonesboro spoke to the Craighead County Medical Assistants Society on "Childhood Diseases Found in the Nursery."

DR. SALTZMAN HONORED

Dr. Ben N. Saltzman of Little Rock has received the Distinguished Service Award from the American Lung Association of Arkansas.

SURGERY OFFICERS

Dr. J. Larry Lawson of Paragould is the new president of the Arkansas Chapter, American College of Surgeons. Dr. Carl Williams of Fort Smith is the immediate past president. Dr. Charles Logan of Little Rock was elected vice president and Dr. Samuel Landrum of Fort Smith was elected secretary-treasurer.

DR. WOODY IN MENA

Dr. Robert C. Woody, a Neurologist, began practice in Mena this month. Dr. Woody also plans to have a Child Neurology Clinic each Friday in Fort Smith.

DR. PAINTER APPOINTED

Dr. Monroe Painter of Fayetteville has been appointed to a seven-year term on the Washington Regional Medical Center Board of Governors.

DR. LOWE HONORED

Dr. Betty A. Lowe of Little Rock received the Distinguished Faculty Award of the Arkansas Caduceus Club.

DR. JACKSON APPOINTED

Dr. M. A. Jackson of Little Rock has been appointed by Governor White to a ten-year term on the Board of Trustees of the University of Arkansas. He replaces Dr. Raymond Miller.

DR. READ ELECTED

Dr. Raymond Read is the new president-elect of The Southwestern Surgical Congress.

Dr. Bernard W. Thompson of Little Rock was appointed State Councillor of Arkansas. Vice Councillors appointed for the State of Arkansas are: Dr. Robert M. Bransford, Texarkana; Dr. Harold H. Mings, Fort Smith; Dr. J. Warren Murry, Fayetteville; and Dr. Kent C. Westbrook, Little Rock.

DR. DENEKE REAPPOINTED

Dr. Milton Deneke of West Memphis has been reappointed to the Board of Directors of the American Lung Association of Arkansas for a two-year term.

DR. BUFFINGTON

Dr. Mike Buffington has opened an office at 105 West North Street in DeQueen.

DR. JOSEPH APPOINTED

Dr. Ralph Joseph of Walnut Ridge has been appointed Lawrence County Health Officer.

DR. WILSON ELECTED

Dr. Carolyn Wilson of Mountain Home is the newly elected president of the Arkansas Association of Home Health Agencies. Dr. Wilson also received a certificate of appreciation for her service on the association's board of directors during the past year.

THINGS TO COME

AUGUST 18

Arkansas Rural Health Conference. Arkansas 4-H Center, Ferndale. Registration $7.50 (includes lunch). The Arkansas Medical Society and Auxiliary participate in the sponsoring of this conference. Five hours Category 1 AMA; five prescribed hours AAFP.

Program is as follows:

8:00 Registration

9:00 Welcome — Don H. Barrow, D.D.S., Conference Chairman, president of the Arkansas Dental Association, El Dorado
Invocation — Sam Adkins, D.Min., pastor of First Baptist Church in Sheridan

9:45 "Medical Education as a Resource"
Thomas A. Bruce, M.D., Dean, University of Arkansas College of Medicine, Little Rock

10:30 "The Health Department Comes Out of the Closet"
Ben N. Saltzman, M.D., Director, Arkansas Department of Health, Little Rock

Noon Luncheon
Invocation — Dr. Adkins
"The Preventive Side of Dental Health"
W. J. Moline, Ph.D., Director, University of Arkansas Cooperative Extension Service, Little Rock

1:30 "Education for Parenting"
Irene K. Lee, Ph.D., Family and Child Development Specialist, University of Arkansas Cooperative Extension Service, Pine Bluff

2:00 "Arkansas Poison Control/Drug Information Center"
Walter J. Morrison, Ph.D., Associate Dean and Chairman, Department of Pharmacy Practice, University of Arkansas College of Pharmacy, Little Rock

2:30 "Hospital Consortia in Eastern Arkansas"
William Peaks, Administrator, Mississippi County Hospital System, Blytheville

3:15 Summary and Adjournment — Dr. Barrow

SEPTEMBER 24-26

Southern Medical Association Regional Meeting. New Orleans Marriott Hotel, Louisiana. For further information, contact Jeanette Stone, Program Development Coordinator, Post Office Box 2446, Birmingham, Alabama 35201; phone (205) 323-4400.

APRIL 18-29, 1983

The Twenty-fourth Postgraduate Institute for Pathologists in Clinical Cytopathology. The Johns Hopkins University School of Medicine, Baltimore, Maryland. Designed for pathologists who are certified by the American Board of Pathology, or their international equivalent. Self-instructional material will be available to augment at individual pace. A loan of slides with texts will be sent to each participant for home-study during March and April before the Institute. Credit hours 125 in AMA Category 1.

Application is to be made before February 2, 1983. For details, write: John K. Frost, M.D., 610 Pathology Building, The Johns Hopkins Hospital, Baltimore, Maryland 21205.

RESOLUTIONS



DR. FINIS Q. WYATT

WHEREAS, At the Divine reckoning, our beloved friend, leader and companion, Dr. Finis Q. Wyatt, has been called to rest; and

WHEREAS, He played so eminent a role in the affairs of this Society for the past many years, and in the welfare of the people of the community, the State, and the Nation; and

WHEREAS, His life was consecrated to the purposes for which this Society was founded and gave without stint of his effort, interest and professional service, many times beyond the call of duty; and

WHEREAS, Dr. Wyatt by his undeviating loyalty and his love for his fellowman, and particularly to those who came under his care, endeared himself to all, regardless to rank or station; and

WHEREAS, His philosophy of life was an admirable, and unique asset to his personal character and to his profession, a philosophy which enabled him to move forward with undiminished

fortitude and courage in the face of known adversity that would have halted a less resolute and dedicated man.

THEREFORE, BE IT RESOLVED THAT WE, the Independence County Medical Society, do adopt this Resolution of Appreciation and Respect; and

BE IT FURTHER RESOLVED, THAT a copy of this resolution be sent to Dr. Wyatt's family, a copy to be furnished to the Journal of the Arkansas Medical Society, and that an additional copy be filed with the minutes of this meeting.

July 2, 1982
INDEPENDENCE COUNTY
MEDICAL SOCIETY



NEW MEMBERS

The Pulaski County Medical Society has six new members:

DR. ROBERT L. BERRY

Dr. Berry, a native of Little Rock, is a 1970 graduate of the University of Arkansas at Fayetteville and a 1977 graduate of the University of Arkansas College of Medicine.

His internship was with Baptist Medical Center in Little Rock. Dr. Berry served his residency in Ophthalmology and a Cornea Fellowship with Tulane Medical Center in New Orleans, Louisiana.

Dr. Berry specializes in Ophthalmology. His office is located at 970 Medical Towers Building in Little Rock.

DR. JAY OWEN BRAINARD

Dr. Brainard, a graduate of the University of Arkansas at Fayetteville, was born in Columbia, Missouri. After graduation from the University of Arkansas College of Medicine in 1974, Dr. Brainard had one year of surgical residency at the Medical Center.

From 1975 to 1978, Dr. Brainard served with the United States Navy as a flight surgeon. He returned to the Medical Center in 1978 and served a residency in Ophthalmology. He has completed the written section for certification by the American Board of Ophthalmology.

Dr. Brainard opened his Ophthalmology practice in July at 405 North University in Little Rock.

DR. ROBERT E. HARRELL, JR.

Dr. Harrell was born in Wynne. He attended Portland State University in Oregon and received his medical degree from the University of Arkansas College of Medicine in 1977. His Family Practice residency was with the University of Arkansas College of Medicine.

Dr. Harrell is certified in Family Practice and practices at 6917 Geyer Springs in Little Rock.

DR. DAVID C. HICKS

Dr. Hicks was born in Little Rock and attended Hendrix College in Conway. He was graduated from the University of Arkansas College of Medicine in 1977.

After a Medicine internship, Dr. Hicks served an Internal Medicine residency and a Cardiology fellowship with the Medical Center. He is certified in Internal Medicine.

Dr. Hicks specializes in Cardiology. His office is located at 690 Medical Towers Building in Little Rock.

DR. THOMAS M. KOVALESKI

A native of Detroit, Dr. Kovaleski received his pre-medical education at Olivet College in Michigan. He is a 1978 graduate of the Wayne State University School of Medicine in Detroit.

Dr. Kovaleski completed an internship, Medicine residency, and Rheumatology fellowship at the Indiana University Medical Center in Indianapolis. He is board certified in Internal Medicine.

Dr. Kovaleski has opened his office for the practice of Rheumatology at 10001 Lile Drive in Little Rock.

DR. MARVIN LEIBOVICH

Dr. Leibovich was born in Memphis, Tennessee, and received his bachelor of science degree from the Memphis State University. He was graduated from the Meharry Medical College School of Medicine in Nashville, Tennessee, in 1977. His flexible internship was with the University of Arkansas College of Medicine.

Dr. Leibovich specializes in Emergency Medicine. He is associated with Baptist Medical Center in Little Rock and has practiced there since 1979.

DR. MICHEL MUYLAERT

Dr. Muylaert, a new member of the Sebastian County Medical Society, was born in Aalst-Belgium.

Dr. Muylaert was graduated from the University of Louvain School of Medicine, Belgium, in 1975. His internship was with St. Peter University Hospital in Louvain, Belgium. He received his residency training at Columbia-Presbyterian Medical Center in New York City. Dr. Muylaert was in private practice in Dallas for two years before moving to Fort Smith.

Dr. Muylaert specializes in Obstetrics-Gynecology. His office is located at 1501 South Waldron Road.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The twelve lead trace shows sinus arrhythmia with rates 52-60 per minute. Right bundle bronch block is evident on the troce. Of interest, the rhythm strip reveols normol conduction when the rote is below 50/minute. This then represents a rate dependent bundle bronch block with the so-colled critical rate being about 50/minute. This young lady most likely hos o functionally normol heort.

September, 1982

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 79 No 4

FORT SMITH, ARKANSAS

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THE PATIENT THINKS HE HAS HEART TROUBLE...



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SCIENTIFIC ARTICLES

The Role of Humanities in Medical Education 125
Wayne Shelton

Parenteral Cephalosporin Antibiotics in Clinical Practice 130
Robert W. Bradsher, M.D., and Robert S. Abernathy, M.D.

FEATURES

ECG of the Month 136
John W. Watson, M.D.

Office Orthopaedics: "Go! VMO!" .. 137
R. Barry Sorrells, M.D.

Medical Grand Rounds: "The Management of the Uncomplicated Myocardial Infarction" 140
Bonnie J. Baker, M.D., Gwen F. Mills, R.N., M.N.S., and James L. Whittle, M.D.

Editorial: "Vasodilators and Heart Failure" 147
Alfred Kahn, Jr., M.D.

From Other Years 148

Medicine in the News 149

Resolutions 153

Keeping Up 154

Obituary 155

Personal and News Items 156

Things to Come 157

New Membrs 158

Woman's Auxiliary 160

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The Role of Humanities in Medical Education

Wayne Shelton*

Need For Critical Reflection

There is a tendency in our society to be uncritical of the ramifications of technology and its effect on the quality of life in general. Indeed, high technology and knowledge are a fascination to the technical practitioner and an end in themselves. However, this trend should be tempered by a thoughtful, mature and critical attitude which can sort out the value and human dimensions of what is being effected. In short, the role of critical reflection, which inspects the ends of practical life, must be developed. Just as Plato and Aristotle believed that the *polis* created a particular kind of life for its citizens, so is our contemporary society creating a life for us. The citizen is inextricably bound to and shaped by society. It is only through the development and use of critical reflection that citizens can understand the kind of life that is being created, the issues which must be addressed, and the ends which should be pursued. The uncritical continuation of the highly technical orientation of contemporary society toward a future which it does not comprehend implies a life without depth, vision or spiritual richness, not to mention, possible catasrophe.

Indeed, much of the basis for today's moral dilemmas stems directly from a lack of attention by our society to fundamental human concerns. For example, the founding fathers of the United States of America had a lucid vision of the life our political structure was attempting to create. A paramount value was the right of the individual citizen to live according to his or her own reasonable moral and preferential dictates without the shackles of extraneous dogma. This value was formulated within the historical confines of the late 18th century. At that time, those astute leaders well understood the problematic forces of their day, which were primarily religious, political and moral oppression. The new country had a keen sense of self-understanding, as a nation, of the kind of life it wished to pursue. I do not wish to suggest that this country has lost that sense of self-understanding entirely. However, as the conditions of society develop historically, fresh analyses must be made to determine whether or not viable goals and values are being sought.

Without question, the historical milieu is dramatically different now than it was 200 years ago. Perhaps the single greatest area which has served as an impetus for change has been in the area of technology, a close counterpart to the industrial revolution and rapid economic and material growth. Human life now exists in a setting which people even a hundred years ago could not imagine. At the forefront of this technological revolution is medical technology. In many instances, human life can be prolonged by artifical means; epidemics avoided; genetic patterns altered; human organs harvested for transplant; and so on. In short, medical technology has made an enormous impact on the nature and quality of human life, both in moral and economic terms. Moreover, it has also created new situations which raise perplexing societal questions for which resolutions do not appear to be forthcoming. A major consequence of these questions is the blatant reminder that many fundamental societal concerns are not being given adequate critical attention.

Medical Humanities: A New Orientation for the Humanities

The humanities encompass disciplines involving analysis, argumentation, illustration, explanation and aesthetic/symbolic representation: the tools of critical reflection. In the context of medical education, these tools specifically are directed to the abundant humanistic issues in medicine for the purpose of promoting public and professional awareness and understanding of the issues, and to bring about the formulation of reasonable policies. From its own perspective, medicine, as with all major practical areas of human society (e.g., law, business, education, government, etc.), must posit values, goals and standards relative to its practical activity, but, which can

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also transcend disciplinary boundaries and pertain to certain broader human concerns. For example, at some point medicine must learn to make reasonable determinations of life and death, quality of life, and the value of certain individuals. Such determinations are essential as a basis for decisions about allocation of medical resources and the boundaries of obligatory and non-obligatory treatments. However, it is impossible to know if the life of a defective newborn or any human in some abnormal or disadvantaged state is worth living until the logically prior and broader determination has been made concerning why it is that normal human life is worth living. Therefore, medical humanities could prove to be a valuable set of tools both in its application in the medical setting and for its bearing on broader human issues.

In order for this kind of reflection to occur, public institutions must take the initiative to insure that prospective professional practitioners, during their training, come to grips with the conceptual issues germane to their practice. It is one thing to possess knowledge of the latest in scientific advancements. It is quite another to be able to communicate effectively; to empathize with the problems of the patient; to extract the non-technical human issues in patient care; to reflect upon them in a sophisticated manner; and, to understand one's duty as a physician. This gap between the impersonal and personal, which is more pronounced in medicine than any other practical area, must be bridged. Medical humanities represent the bridge between this gap. The excellent physician in today's medical setting must be both a technician and a humanist. Therefore, the system in which physicians are trained must be reevaluated accordingly. In fact, medical education has undergone initial change in this direction during the last ten years. Many medical schools in the United States have begun programs in medical humanities and attempted to show the close intimacy of these disciplines to medicine.

There are a number of specific reasons why these disciplines have generated enthusiasm from professionals, both in the humanities and medicine. The general reason is the widespread awareness of the limitations of medical education in preparing physicians to deal with the total range of issues they must encounter. Physicians clearly are highly trained, conscientious professionals. The deficits of medical education are not a reflection of anything lacking in the character and commitment of the physician. On the contrary, the problem lies within the educational structure in which physicians have been educated and the ways in which medical students have normally progressed throughout their educational careers.

To begin with, premedical education consists, in most instances, of a heavy emphasis on the biological and chemical sciences, often to the exclusion of courses in the humanities. Although this pattern is not true for all students, it is true for most. After this thorough scientific training, the student next moves on to the first two years of medical school, which until recently were almost exclusively science courses, many of which the student had already taken as an undergraduate. Finally, in the third and fourth years of medical school, the student makes his or her first encounter with patients. Since it is at this point that problems and issues arise that are not of a scientific nature, it is precisely where the educational deficit manifests itself.

Concurrent with this awareness of the deficits of medical education has been the equally growing awareness on the part of the public, academicians, and physicians of the complex human values questions inherent in medical practice. Many of the advancements in medical science and technology have given rise to enormous ethical dilemmas which are becoming the subject of intense public and professional debate. The following examples will illustrate this:

- Perhaps the single most controversial issue in medical ethics is abortion. Abortions have always been available, one way or another, and are currently available upon request in most medical facilities (within the law — following the 1973 Supreme Court ruling). Much intense public controversy rages concerning whether or not fetuses are to be accorded the rights of a person. What is a person? What does it means to have rights?
- Patients cannot be kept alive by artificial means on respirators which create predicaments where a patient has a permanent loss of brain function with no possibility of exhibiting normal consciousness. Is this patient alive? What is the definition of death? Who is to decide what is best for the patient?
- Due to the tremendous advancements in neonatal care, severely defective and/or premature infants can be kept alive. However, in some instances, they grow up to be severely limited in physical and mental capabilities, resulting in a permanent, institutional and vegetative existence. Should extraordinary measures always be taken to save the lives of these infants? Is there a certain minimal quality of life below which life is not worth living? What criteria should be used in determining quality of life?
- Most of the recent successful drugs used in cancer treatment are the result of experimental drug programs. At times, patients, some of whom may be children, are

given experimental drugs which have been improved as to their therapeutic benefits. Is it justifiable to treat a patient with drugs of improved effectiveness? Is the potential well-being of all similarly afflicted patients of greater value than a single patient? Which is to be valued more, the individual or the collective group?

- Science has the technical capabilities to control human reproduction and to eradicate certain kinds of genetic disorders and even to create the kinds of human beings society might consider to be most desirable. Does the state have the right to prevent certain individuals from having children? Is individual freedom, regardless of the social consequences, to be guaranteed to all human beings, without distinction?

Although the examples could go on and on, it is clear that there are many troublesome values questions which arise out of a relatively new context in the practice of medicine. These questions, most importantly, are *not* scientific issues. No amount of medical or technical information can answer them. Rather, they represent fundamental issues which any enlightened society must address, and they have received systematic, critical treatment by thinkers throughout the ages. These questions are no longer simply academic queries, but practical issues for which policies and practical solutions must be formulated. If they are to be dealt with in a thorough and intelligent manner, more time must be devoted to them during the physician's training. Not only must the medical community reflect on these issues, but also society at large. Many of these issues will have to be settled on a collective or political level. The discussion and reflection which is beginning in the medical settings around the country should serve to make the collective level of thinking more refined and sophisticated.

Other factors enter into this recent movement. One is the widespread public tendency to maintain the rights of the individual patient to an extent unheard of until recently. The time has passed when all patients will passively permit a physician to have total authority over the decisions that affect his or her life or body. Most patients want to understand their condition and to be informed of the available alternatives and relative risks of diagnostic and therapeutic options. From this growing public awareness there has developed a new role for the patient: an autonomous being with the right to be self-governing. Therefore, a radical shift away from paternalism and toward individual autonomy has taken place.

Second, the economic system in which contemporary medicine is practiced now raises issues concerning the fairness of health care delivery in a capitalistic society. Citizens of low socio-economic status frequently are priced out of the market due to the high cost of medical care. Clearly, a mature and fair-minded critical attitude must be promoted in order to insure that every deserving citizen has adequate access to health care delivery. Physicians have an obligation to understand how their own individual practice meshes into the general needs and concerns of society.

Out of this contemporary setting in society, the humanities have gained a more relevant and practically-oriented role. The humanities are no longer the totally academic fascinations of those who are insulated from the vital issues of society. The humanities can be put to use by helping medicine to understand better many of its non-technical problems which have a significant impact on health care delivery. It will be helpful at this point to delineate briefly the three primary (not exclusive) areas which comprise medical humanities and how each can be put to *use*.

Medical Ethics

The area which has received the most widespread attention, both professionally and publically, has been medical ethics. Medical ethics, as a sub-specialty of ethics, lies within the discipline of philosophy. During this century, philosophy in this country, out of the English, analytic tradition, has been dangerously divorcing itself from its traditional roots; much of it is technical and academic, oriented toward the body of professional philosophers. This trend creates an artificial, insulated environment for philosophy, preventing it from directing its potentially important, critical method to the pressing conceptual and practical issues of society.

Medical ethics is a way of returning philosophy to its traditional Socratic roots. Philosophy, to Socrates, never consisted of just academic (inconsequential) reflection. Instead, philosophy on the Socratic view arises out of the paradoxical and chaotic elements inherent in human experience. Through the tools of reason, logical analysis, and argumentation, philosophy attempts to *see through* this disorder and to transform the disorderly into the realm of the intelligible. There is a direct relationship between the extent to which the problems in human society are comprehended theoretically and the development of reasonable practical solutions. Therefore, philosophy is a method of theoretical enlightenment which enables one to live more rationally, har-

moniously, and happily in our environment. Medical ethics represents a practically oriented theoretical discipline ultimately seeking to formulate consistent and enlightened policy concerning ethical questions in medicine. On the basis of conceptual analysis and the development of substantive philosophical positions, clinical decision-making is given a valuable objective and critical aid for many of its perplexing issues.

First and foremost, medical ethics is clinically oriented. The philosophical issues in medical ethics (which include ethical as well as broader conceptual issues in metaphysics, epistemology, and social and political philosophy), are extracted from a concrete, practical setting in which medical practitioners find themselves confused, or at least not in agreement, as to the proper course of action or treatment for certain patients. Take for example, the situation mentioned earlier, patients with a total and permanent loss of brain function (flat EEG) who are maintained on an artificial life support system. Health care practitioners are often confused as to whether or not to take the patient off the support system. No apparent benefit seems to be accruing to the patient. On the other hand, often the heart and lungs are functioning which in the past would have to have stopped in order to meet the sufficient conditions for death. This situation is an excellent illustration of how technological advancements nullify traditional conceptual and value frameworks and make them stand in need of reevaluation and reformulation. What counted as valid criteria for death twenty years ago is no longer adequate. This situation forces one to ask anew: what is the definition of death? This is precisely where ethical analysis and argumentation enter. An example of a skeletal substantive philosophical position on the concept of death will be helpful.

One alternative approach to this question would be to argue, as did a Harvard Ad Hoc Committee which set out a brain death criteria, that a total and irreversible cessation of brain wave activity is a sufficient condition for a human being to be considered dead, regardless of heart and lung functions. Furthermore, it could be argued that the capacity for social interaction is a necessary condition for personhood. It follows that when there is a total and permanent cessation of brain wave activity there is obviously no capacity for social interaction and therefore no personhood. The upshot of this line of thinking is that death occurs when personhood is irretrievably absent and the clinical criterion for personhood is a flat EEG. From this tentative conclusion a policy recommendation can be made.

Of course, the question of the definition of death, as well as other major medical ethical issues, have not been answered definitively. Alternative recommendations, as the one above, are efforts to convince the body of health care professionals as well as other segments of our society of the reasonableness of certain positions. Solutions should emerge in the future after considerable public and professional discussion of the alternatives. For the present, this process is beginning in medical education. Through the teaching of medical ethics physicians will learn to incorporate a more reflective and informed attitude into their handling of moral and value issues which continually arise in the practice of medicine.

History and Medicine

Physicians are trained in a highly technical and scientific discipline. It is all too easy for the young, aspiring technician to be oblivious to the historical background and events which lead to the current state of affairs. The history of medicine and science promotes a deeper appreciation of the development of medicine and the way in which current medical practice interfaces with the broader, cultural and religious setting. This enables physicians to have more insight into situations in which patients find themselves and the way medical practice affects that situation. Again, the pay-off is very practical — greater ability for understanding, empathy and rationality in patient care and clinical decision making.

The development of a sense of historical understanding for any discipline, especially for well-established ones like medicine, is a way of self-understanding for the discipline: its traditional organization, techniques. concepts, assumptions and goals. Moreover, such self-understanding has a sobering effect in that it connects the current state of affairs in medical practice to a very dissimilar past state. Medicine, then, is seen as a continuous, dynamic and expanding historical craft. Within today's medical educational framework, this perspective is not widely instilled in physicians. Typically, physicians analyze the organism by means of embryology and determine the status of their patients through case histories. Without a broader perspective of his discipline, the physician can easily become engulfed in a

myriad of details which are not systemically comprehended in their historical, contextual development.

Disease is more than the biochemical and physiological breakdown of a human body. Powerful social and cultural forces dictate whether people become sick or not, as well as the nature and degree of success of the treatment. The medical profession is an essential ingredient of society which implies a close connection to religion, politices, economics, philosophy and the gamut of human culture. Furthermore, the nature of the physician's education, his or her social and economic status, and often the kinds of available medical specialties, depend in large measure on the preferences and values of society. It is medical history which deals with this social and cultural background. Medical education must equip the physician to be more than a mere technician; he or she deals not just with disoriented metabolisms, specific infections, or neoplasms, but with sick human beings. Much of the effect of the physician's treatment of the patient depends on the kind of relationship which occurs between the doctor and patient. Unfortunately, scientific and technical education, due to its vast and detailed content, has had a negative impact on this aspect of medicine. Medical history provides perspective and allows one to emphasize the areas of medical practice with which science and technology do not deal.

Literature and Medicine

Another method of enriching the medical perspective is through literature. The human condition is reproduced not only in factual, objective accounts, but also in various literary forms. The interrelations and predicaments of literary characters relating to medicine can be explored through the novel. In studying ethical issues in medicine, literature, particularly, can bring issues to life by illustrating the human dimension. For example, medical details pervade Albert Camus' *The Plague,* and it convincingly dramatizes suffering as part of the human predicament. Or, the issue of experimentation on humans can be demonstrated through Nathaniel Hawthorne's story, *Rappaccini's Daughter,* a classic account of a scientific experimenter who used his daughter's body to test theories of poison.

Specifically, there are several reasons for using literature in the medical curriculum. The experience of having a painful disease is foreign to many healthy students of medicine. At the same time, suffering is something with which they must be very familiar if they are to have effective relationships with suffering patients. The same might be said of other human experiences such as depression, apathy, despair and grief. Literature provides the reader with a deep familiarity of these experiences without having to experience them directly. This kind of vicarious experience allows the reader to examine them more critically and objectively than those who are directly involved. This further allows one to be prepared to deal with these experiences both personally and professionally.

Conclusion

The benefits of the humanities in medical training is evident if the goal is to produce a well-rounded physician and to promote a reflective attitude concerning crucial societal issues. Again, science alone cannot do this. For this reason, many medical schools throughout the United States have been developing programs on humanities (sometimes called human values) which are integrated into the medical curriculum. These programs vary somewhat in the areas of the humanities which are emphasized, but clearly medical ethics is given more attention. Perhaps humanities in medicine can best be described as stated earlier, as a means of bridging a gap between the personal and impersonal which had developed as a result of today's high technology and knowledge. The humanities can bridge this gap by:

1) emphasizing to the student that the object of his or her scientific skills is a fellow human being who deserves respect and concern, and who may have a very different value system than his or her own, and,

2) developing in the student a more sophisticated capacity to reflect on the humanistic issues which are inherent in health care delivery and medical practice.

Since October, 1980, there has been a concerted effort at the University of Arkansas for Medical Sciences, College of Medicine, to integrate a humanities program into the curriculum and general hospital setting. As a result, there is now a new and permanent division in the College of Medicine called Program on Humanities in Medicine which will employ two fulltime and five part-time humanists. Twenty clock hours have been set aside in the curriculum for a required course, "Introduction to Medical Ethics," for freshmen students. Other humanities topics will be integrated into existing activities.

Parenteral Cephalosporin Antibiotics in Clinical Practice

Robert W. Bradsher, M.D., and Robert S. Abernathy, M.D.*

Introduction

Cephalosporin antibiotics make up a large fraction of parenteral therapy of infection. In the past several years, there has been a proliferation in the number of this particular class of antibiotics. Because of similar characteristics, arbitrary classifications often described as "generations" have been given to cephalosporins. The purpose of this discussion is to first give general comments and then review the basic differences in the antibiotics of each class, and finally give our opinions about the indications for these agents.

General Comments

Cephalosporin antibiotics have in common a six-membered dihydrothiazine ring in conjunction with the β-lactam ring that is characteristic of all β-lactam agents. The basic differences in the agents are due to modifications of the various side chains that extend from the common backbone of the molecule. These changes can increase stability to gram-negative bacillary β-lactamase enzymes that destroy the drug, alter the pharmacokinetics or improve the activity of the drug to gram-negative bacilli.[1] Further statements about the chemical differences of cephalosporins are beyond the scope of this review.

The mechanism of action for all β-lactam drugs, including cephalosporins, is thought to be binding of the drug to certain cross-linkages of the peptidoglycan portion of bacterial cell walls.[2] Because of a subsequent weakening of the cell wall, defective or distorted bacteria result with death of the organism. This overly simplified scheme has been expanded with the discovery of specific β-lactam antibiotic binding proteins which initiate a series of events that result in protein synthesis inhibition and loss of an autolysin enzyme.[3]

Bacterial resistance to the cephalosporin antibiotics is primarily due to destruction by β-lactamase enzymes.[4] These enzymes may be present because of either plasmid-mediated or chromosomal changes in the bacteria. Obviously, bacteria that are in sites unreachable by the cephalosporin will be safe from the activity of the drug. In general, cephalosporins are cleared by renal mechanisms although metabolism may also occur to yield agents which are usually inactive against bacteria. Active drug is distrbuted to most body compartments including joint, pleura, peritoneal and pericardial spaces; urine levels are predictably high because of the renal clearance.[1] Concentrations in the bile vary from one agent to the next[5] but it should be remembered that there are not any antibiotics which can achieve sufficient levels in that fluid if biliary obstruction is present. Penetration into cerebrospinal fluid has been minimal with the earlier agents so that meningitis due to susceptible bacteria has developed while on therapy.[6] The ability of the more recent drugs to cross the blood-brain barrier will be discussed later.

The frequency of significant toxicity from clinically utilized cephalosporins is relatively low compared to many other antibiotics. Hypersensitivity reactions certainly occur in patients with penicillin hypersensitivity and may be found in those without a history of such a reaction, but with a much lower frequency. The amount of cross-reactivity between penicillin and cephalosporin is still unclear; there have been several patients reported to safely receive cephalosporins in the presence of a positive skin test to both major and minor determinants of penicillin which indicate immediate hypersensitivity to penicillin.[7] However, it is generally not wise to give cephalosporins to a patient with a history of anaphylaxis to penicillin. Hematologic complications are unusual but include pure red cell aplasia, Coombs positive hemolytic anemia, leukopenia, and thrombocytopenia. Very rarely clotting abnormalities may occur which will respond to vitamin K on most occasions. Renal toxicity is also uncommon but increased toxicity when combined with tobramycin or gentamicin has been reported[8] and interstitial nephritis in response to cephalosporins has been described.[9]

First Generation Cephalosporins

Cephalothin is the prototype of the earliest generation of these agents. Other agents of this class are listed in Table 1 and are similar in most re-

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TABLE 1.
FIRST GENERATION CEPHALOSPORINS

Cephalothin (Keflin)
Cefazolin (Ancef, Kefzol)
Cephapirin (Cephadyl)
Cefradine (Velosef, Anspor)
Cephracetrile (Celospor)
Cephaloridine (Loridine)
The latter two agents are not used in the United States. Cephacetrile is not marketed and Cephaloridine is nephrotoxic.

spects. This class has the greatest stability to *Staph aureus* β-lactamase enzyme than the more recently developed agents, and therefore are the most potent cephalosporins for staphylococcal infections. Several gram-negative bacilli including *E. coli* and *Klebsiella pneumonia* are inhibited by these durgs but they cannot be relied upon for serious infection due to these types of organisms without sensitivity data. Gram positive cocci, with the exception of enterococcus, are effectively killed. These agents do not possess anaerobic activity as strong as penicillin G but will kill Clostridia species. Cefazolin has a longer half-life than the others of this class, allowing every 8 hour dosing as opposed to every 6 or 4 hours for the other agents.[10]

The major indication for first generation cephalosporins, in our opinion, is primarily as a substitute for penicillin therapy in someone who has penicillin allergy other than anaphylaxis and with the exception of anaerobic pleuropulmonary disease or enterococcal infection. If a gram-negative bacillary organism that is isolated as the cause of infection from a patient can be shown by *in vitro* sensitivity testing to be susceptible to these compounds, it is reasonable to use these relatively less expensive drugs. Thirdly, preoperative prophylactic antibiotics are often given for clean surgical cases such as orthopedic, cardiovascular or peripheral vascular procedures to prevent surgical wound infections that might be devastating if they occurred. The usual pathogens associated with these types of procedures are staphylococcal organisms, both coagulase positive and negative.[11] Since the first generation cephalosporins are the most potent against staph, it is logical that they should be used rather than agents with less activity. Many *Staph epidermidis* organisms are resistant to semi-synthetic penicillins, like Nafcillin, while sensitive (if in a low inoculum) to cephalothin or cefazolin.[1]

The major deficiencies of the first generation cephalosporins include the fairly narrow spectrum with respect to gram-negative bacilli and the lack of activity for gram-negative anaerobes and enterococcus.

Second Generation Cephalosporins

In 1978, both cefamandole and cefoxitin were released for clinical use and these agents have increased the bacterial spectrum of cephalosporins. Cefoxitin is actually a cephamycin produced by a different microorganism but, in practice, can be considered as a cephalosporin. These newer agents have an increase in activity against some cephalothin-resistant gram-negative bacilli, such as Enterobacter species, some Serratia species, and Provedentia species. Unfortunately, the minimal inhibitory concentrations are not like pneumococcus and penicillin; relatively large concentrations (8-32 μg/ml) are required for killing of most of these resistant organisms. Both agents have a relative decrease in activity against gram-positive organisms like *Staph aureus* but usually are effective in treatment of all but very severe staphylococcal infection such as endocarditis. Cefamandole has the advantage of significant activity against ampicillin-resistant *Hemophilus influenzae* infections[12] but because of poor penetration into spinal fluid it must be reserved for non-meningitic infections.[13] Cefoxitin is very stable to anaerobic bacterial β-lactamase and has been shown to be effective against penicillin non-responsive anaerobic infections.[14] There are a number of investigational second generation cephalosporins (Table 2) which may or may not be marked in the U. S. Ceforanide has a longer half-life of 4 hours so that twice or even once

TABLE 2.
SECOND GENERATION CEPHALOSPORINS

Cefoxitin (Mefoxin)*
Cefamandole (Mandol)*
Cefuroxime**
Cefonicid**
Ceforanide**
Cefmetazole**
Cefotiam**
Cefazaflur**
Ceftezol**

*FDA Approved
**Investigational

daily doses may be appropriate for selected infections. Cefuroxime has been in use in Europe but does not have distinct spectral differences from cefamandole.

The major indication for cefamandole appears to be in *H. flu* infections in pediatric patients to avoid the use of chloramphenicol. Caution should be exercised to continue to observe for meningitis in those patients.[13] Some physicians recommend cefamandole for adults with pneumonia to adequately cover pneumococci, staph, and *H. flu*.[15] We have not routinely recommended this therapy for the usual case of community-acquired pneumonia.

Cefoxitin appears to offer single therapy of certain diseases that otherwise would require combination therapy to cover gram-positive cocci, gram-negative bacilli, and anaerobes. Diabetic foot ulcers with cellulitis or decubitis ulcer infections are good examples.[16] When anaerobic organisms are likely to be present, cefoxitin offers an increased coverage for prophylaxis of surgical procedures such as Cesarean sections, urologic procedures or other pelvic surgery.[17] Although some recommend cefoxitin alone for presumed intra-abdominal infection, if a patient has been in the hospital for a significant time prior to institution of the drug, some of the colonic aerobic gram-negative bacilli might be resistant to cefoxitin.[18]

The major problem with this class has been the fairly rapid development of resistance, particularly with Enterobacter, in certain hospitals.[19] We cannot recommend these drugs to be used alone in the initial empiric therapy of presumed serious infection. Another drawback is the lack of effectiveness against aminoglycoside-resistant gram-negative bacilli or against *Pseudomonas aeruginosa*.

Third Generation Cephalosporins

Because the second generation agents are not uniformly active against cephalothin-resistant gram-negative bacilli, the pharmaceutical industry has been very active in producing modifications to the basic cephalosporin molecule. Cefotaxime is the forerunner of this third generation of cephalosporins which have extreme gram-negative bacillary β-lactamase stability and unprecedented activity against many gram-negative bacteria.[20] Cefotaxime was approved for clinical use by the FDA in March 1981 and was soon followed by the release of Moxalactam in October. Moxalactam is another agent which is not a cephalosporin in the strict sense because it has a dihydrooxazine ring and is actually best called an oxa-β-lactam but may be considered as a cephalosporin.[21] The other investigational agents that fall into this category are listed in Table 3. An antimicrobial activity scale of selected cephalosporins for various bacteria are listed in Table 4. Because these agents are the newest to clinical medicine, discussion for certain of the agents is planned.

Cefotaxime: This drug is the prototype and has 20-100 times the activity of cefoxitin against many gram-negative rods. It is metabolized to a des-acetyl derivative which uniquely has synergistic activity with the parent compound against

TABLE 3.
THIRD GENERATION CEPHALOSPORINS

Cefotaxime (Claforan)*
Moxalactam (Moxam)*
Ceftriaxone (Rocephin)**
Cefoperazone**
Ceftizoxime**
Ceftazidime**
Cefsulodin**
Cefotetan**
Cefmenoxime**

*FDA Approved
**Investigational

TABLE 4.
ANTIMICROBIAL ACTIVITY SCALE OF VARIOUS BACTERIA TO SELECTED CEPHALOSPORINS

Organism	Cephalothin	Cefamandole	Cefoxitin	Cefotaxime	Moxalactam	Ceftriaxone	Ceftazidime
E. coli	1	3	3	4	4	4	4
Serratia	0	1	2	4	4	4	4
Provedentia	0	2	2	4	4	4	4
Enterobacter	0	3	3	4	4	4	4
Group B Streptococci	4	4	3	4	2	4	4
Staph aureus	4	3	2	2	2	2	2
Enterococci	0	0	0	0	0	0	0
Pseudomonas	0	0	0	2	3	2	4
Anaerobes	0	1	3	3	4	3	4

Scale: 0 = no significant activity; 1 = minimal activity; 2 = moderate activity; 3 = usable spectrum of activity; 4 = excellent activity.

many organisms. The half-life is about 90 minutes so that every 6 hour doses are required.

Moxalactam: There is even less gram-positive cocci coverage but about the same gram-negative activity as cefotaxime. It has about twice the blood levels, however, and a half-life of 120 minutes so that some recommend every 8 hour dosage.

Cefsulodin: Although this drug has equivalent potency to cefamandole for most gram-negative bacilli, it has as the advantage of *Pseudomonas aeruginosa* coverage with 16-32 times the activity of carbenicillin.[22]

Ceftizoxime: This agent has about twice the activity of cefotaxime but levels about half as high in the serum.

Ceftriaxone: The major advantage that this agent has is the fact that it has a half-life of 8 hours. After a 1.0 gram dose intravenously, one can expect levels in the serum of 100 μg/ml at 1 hour and 35 μg/ml 12 hours after the dose. With MIC values of less than 1 μg/ml for most susceptible gram-negative bacilli, doses of twice or even once a day may be given for serious infections.[23]

Ceftazidime: While maintaining the activity of cefotaxime against most gram-negative bacilli, this drug has comparable activity to cefsulodin against *P. aeruginosa*.[24]

Cefoperazone: This agent appears to be more active against *P. aeruginosa* and anaerobic bacteria than cefotaxime and moxalactam but not to the same degree as ceftazidime.

It should be mentioned that most of the differences listed above are primarily based on *in vitro* determinations and that clinical information is still relatively small for these new agents. From MIC data, it is clear that although these drugs are active against many gram-negative bacilli in concentrations approaching those of pneumococcus for penicillin, there are some organisms that are not killed including enterococcus and *Staph epidermidis*. In fact, even *Staph aureus* has lower MIC values for the earlier generations of cephalosporins. Another problem has been the development of resistant organisms such as Pseudomonas and some Enterobacter species while on therapy for a number of these agents.[25,26]

There are two major advantages of these drugs. First, even aminoglycoside-resistant organisms are killed so that these agents may be utilized without a potentially nephrotoxic agent, the aminoglycoside.[27] The other major advantage is the ability of these drugs to penetrate the blood-brain barrier and therefore offer effective treatment for the rare infection of gram-negative bacillary meningitis.[28] Reviews have indicated that both cefotaxime and moxalactam are effective in treating this form of meningitis.[28,29] Since the second most frequent cause of meningitis in neonates is *E. coli*, these agents are attractive to the pediatrician who wishes to avoid chloramphenicol therapy, which may have significant toxicity and is often unsuccessful. It should be remembered, however, that moxalactam is not as effective against the most common cause of neonatal meningitis, Group B streptococci.[30] Obviously, penicillin remains the drug of choice for the majority of cases of pyogenic meningitis.

There are three big problems for this new class of drugs to treat infections. The first is that there are still a number of organisms that are not killed by these agents and superinfections with *S. epidermidis*, resistant Pseudomonas, Acinetobacter, enterococcus, Candida albicans, etc., may occur. Moxalactam therapy was associated with a large percent of enterococcal superinfections in one series, for example.[31] The second disadvantage is a relative decrease in the activity to *Staph aureus* so that prophylactic antibiotic therapy for clean operative procedures is probably more effective done with first generation agents. Finally, these new agents are expensive. The cost to the pharmacy ranges about $40-60 per day for the agents now available and the others are predicted to cost about the same. The cost to the patient is even more and estimates of $1,500 for a course of therapy has been suggested.[32] When these agents are used appropriately, this cost may be justifiable, particularly when used to replace combination therapy. The cost of a β-lactam drug plus an aminoglycoside plus an anaerobic active drug is usually more than the cost of one of these new agents, especially when all the pharmacy preparation time is taken into account.

Future Generations

Since parenteral cephalosporins make up a large fraction of the total antibiotic use, we predict an ever-increasing number of these agents will be marketed. In fact, carbapenem antibiotics such as thienamycin, have been described which have activity even against *Pseudomonas aeruginosa, Staph epidermidis* and enterococcus, the three biggest gaps in the spectrum of third gen-

eration cephalosporins.[33] Monobactam antibiotics are being characterized that could essentially eliminate the need for aminoglycoside antibiotics. The newer penicillin derivatives such as mezlocillin, piperacillin and azlocillin, are not the subject of this discussion but might be rivals for these new cephalosporins.

Summary

This review was written to put the cephalosporin antibiotics into perspective for clinical practice. The newest agents offer some significant advances, particularly in the treatment of gram-negative bacillary meningitis and to cover organisms previously only killed by relatively toxic drugs. However, we feel that to disregard the first or second generation cephalosporins is inappropriate. For prophylaxis against staphylococcal infections, cephalothin or other first generation agents remain the most effective agents. We also suggest that before any new cephalosporin is added to a hospital formulary, careful consideration be given to whether the new agent has significant advantages that will make it worth the expense to stock more than one of these new antibiotics.

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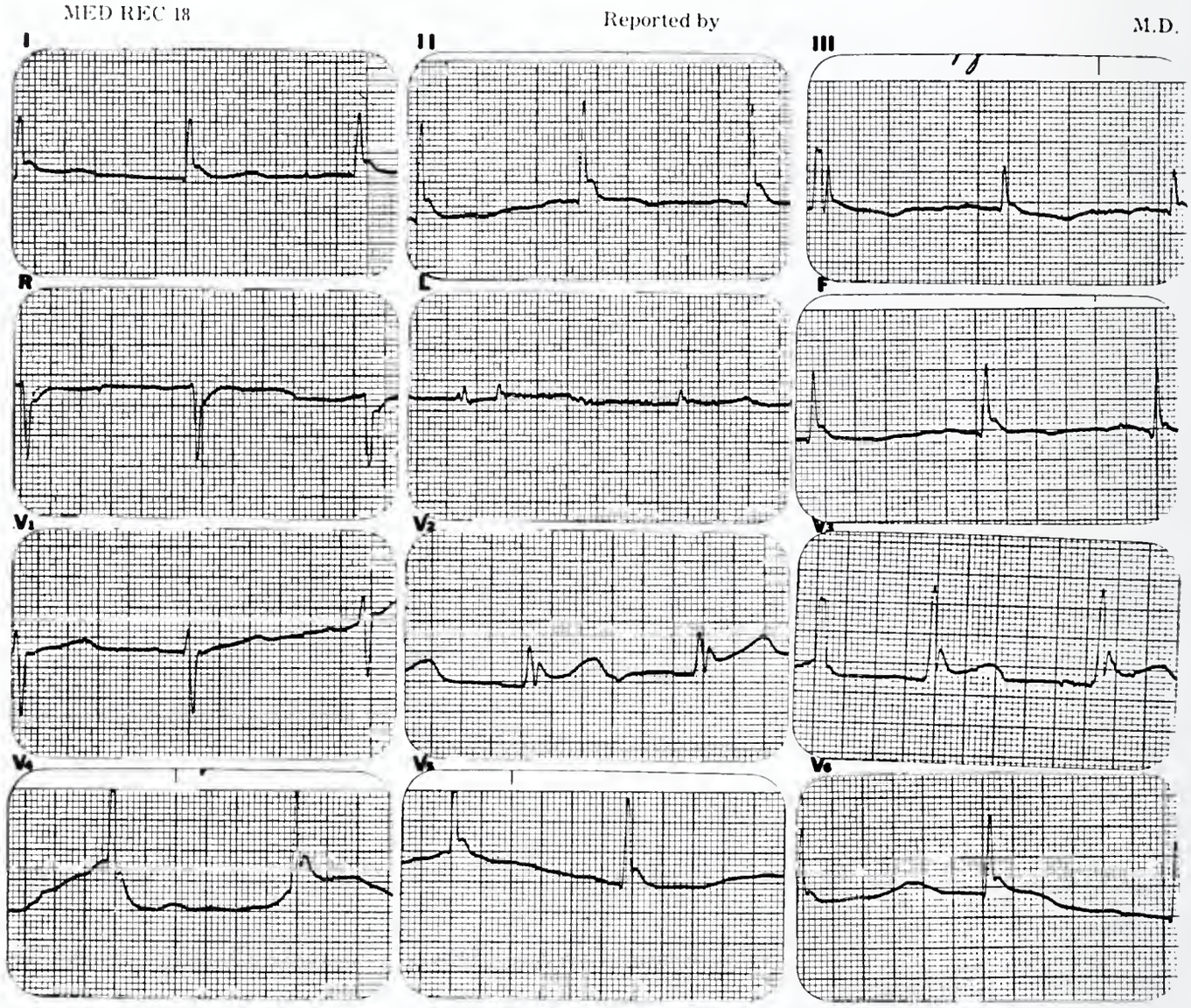
We thank Margaret Morrison and Inelle Reynolds for secretarial assistance.

ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 160)

HISTORY: D. H. is a 51-year-old female who was a victim of prolonged cold water immersion. On physical examination, she was found to have a core temperature of 81°F and a slow but regular pulse rate. The patient's ECG is shown. What do you think about the trace?



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Office Orthopaedics

GO! VMO!

R. Barry Sorrells, M.D.*

The action of the quadriceps femoris muscle in producing extension of the knee joint is the basic factor in maintaining the erect posture in man.[1] Stabilization of the knee joint by the quadriceps, which has enabled man to stand erect, walk, and run, is a late evolutionary acquisition. Hence it is unstable and easily deranged by knee injury.

When the knee is injured by accident or operation or otherwise diseased, reflex inhibition of the quadriceps takes place rapidly. Atrophy ensues at an astonishing rate and disability may be severe. The knee may "buckle" because of a weak quadriceps muscle and the ability to walk on the extremity may be lost because of instability. When the quadriceps strength is lost, other supporting structures about the knee (ligaments, capsule, other muscles) may be put under stress and additional injury may occur. The weakened knee reacts by producing effusion, effusion leads to atrophy, and a vicious cycle is established.

If the above events (quad weakness, atrophy, effusion) are to be prevented, quadriceps muscle rehabilitation must be of prime concern when treating any knee injury or disease state.

While the quadriceps femoris is the prime stabilizer of the knee, other muscles such as the tensor fascia lata, gluteus maximus and gastronemius lead to stabilization in extension also. These muscles, however, are of only minor importance when compared to the part played by the quadriceps. Likewise the knee flexors (semimembranosus, semi-tendinosus, biceps femoris, gracilis and sartorius) are important flexor muscles. Quadriceps strength normally is three times that of the combined six flexors.[2] The quadriceps is *the* important knee muscle!

The quadriceps is not a single unit, but as indicated by its name, consists of four parts — the rectus femoris, vastus lateralis, vastus intermedius, and vastus medalis (Figure 1). The rectus femoris alone cannot fully extend the leg; the vasti are required. The vasti function as a unit to pull the patella upwards and consequently the leg into extension. The vastus medialis obliqus (VMO), the distal portion of the vastus medialis, is the muscle responsible for producing the final 10° to 15° of knee extension. Unquestionably, it is one of the most important components of the quadriceps apparatus. It is the VMO which is primarily responsible for the stabilization and protection of

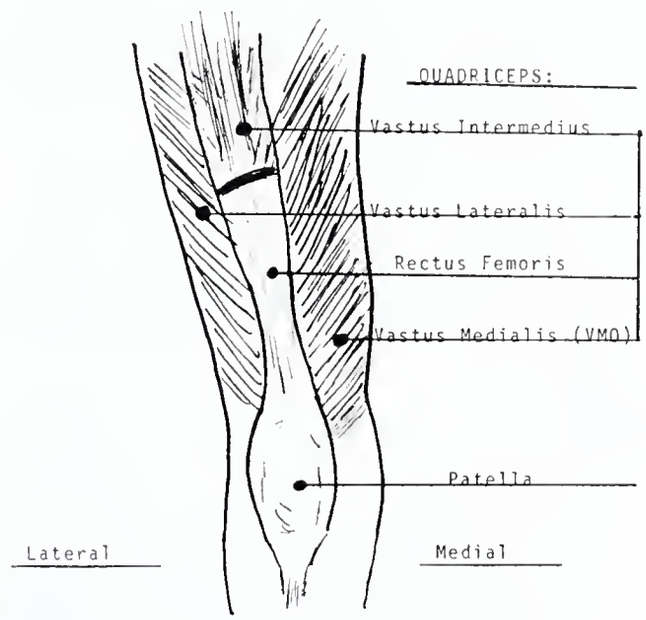


Figure One. Right Knee

*Little Rock Orthopedic Clinic, P.A., P. O. Box 5270, Little Rock, Arkansas 72215.

the knee joint.[3] Unfortunately this important knee stabilizer is also the first to atrophy following knee injury, surgery or disease. Hence, its rehabilitation is of prime importance in return to normal function.

Following knee injury, knee surgery or disease, quadriceps exercises should be instituted as early as possible – when these exercises will not aggravate the primary knee problem (fracture, ligament or muscle repair, arthroplasty, synovitis, etc.). This obviously is a clinical judgment and variable from one patient to the next.

A full knee joint range of motion (ROM) is not necessary to adequately exercise the VMO. In fact, a full active ROM exercise is contra-indicated in many knee diseases such as chondromalacia of the patella where patellar excursion and loading is undesirable. The VMO can be adequately exercised through the terminal 30° of motion leading to knee extension. Joint ROM is thus kept to about 25% of normal motion.

Muscle strength and endurance are gained by repetitive contractions, not by a single vigorous contraction. A muscle is more adequately built by multiple contractions against moderate weight rather than a heavy weight lifted a few times. The muscle should be held in contraction a brief period to fully challenge the muscle fibers.

THE VMO EXERCISE PROGRAM

Materials Needed

1. A cooperative patient willing to work!!
2. A large ladies handbag with soft loop handle.
3. Weight – bricks, canned food, sand, lead – most anything.
4. A relatively high bench or table – the kitchen counter for instance.
5. A support on which to rest the foot so that no more than 30° knee flexion (straight knee = 0°) is allowed. A chair or stool will suffice.

Program

1. Sit on table and support foot at 30° knee flexion.
2. Place purse handle over ankle.
3. Place a small to moderate amount of weight in the purse (Figure 2).
4. Slowly extend the knee to maximum (place hand on VMO and feel the contraction). (Figure 3.)
5. Count slowly to "5" (five seconds).
6. Slowly return the foot to the support at 30°.
7. Relax the muscle for count of "2" (two seconds).
8. Repeat Nos. 4, 5, 6, and 7.
9. Repeat for a total of 15 repetitions and rest for a few minutes.
10. Repeat 15 more repetitions, always held to the count of "5". If both knees are being



Figure 2.



Figure 3.

exercised, do 15 repetitions on one knee, then 15 on the other, then return for 15 more on each, alternating knees.

*This program should be carried out three times daily for a total of 90 repetitions (six sets of 15) each day.

*When one can lift a given amount of weight 15 times, held to the count of "5"; more weight should be added — but *never* an amount that cannot be lifted 15 times to a "5" count. The goal is to function maximally at any time and increase the amount of weight lifted as strength is gained.

If significant pain is developed or effusion occurs, the weight should be decreased, or perhaps the program temporarily discontinued if the doctor so determines. The program should ideally start with a small amount of weight, *gradually* increased as tolerated.

This simple program should yield a noticeable relief of symptoms and a measurable increase in VMO strength and hence knee stability in a reasonable period of time.

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MEDICAL GRAND ROUNDS

The Management of the Uncomplicated Myocardial Infarction

Bonnie J. Baker, M.D., Gwen F. Mills, R.N., M.N.S., and James L. Whittle, M.D.*

The mortality rate of acute myocardial infarction has been reduced by the development of Coronary Care Units for the management of potentially fatal arrhythmias early in the course of a myocardial infarction. Unfortunately, the reduction of mortality of myocardial infarctions has plateaued because most deaths are now due to left ventricular pump failure. As physicians, we have become enamored with the treatment of complex arrhythmias, acute mechanical events, or cardiogenic shock. However, we must recall that the majority of patients will survive the myocardial infarction with little or no sequelae. It is this group of patients that we would like to address in this discussion of management of the totally uncomplicated myocardial infarction.

Should Holter Monitoring Be Done Prior to Discharge?

A common question that arises with regard to the uncomplicated myocardial infarction is what type of follow-up should be done regarding arrhythmias in the peri-infarction period. First of all, it should be stated that ventricular fibrillation occurring within the first 48 hours of an acute myocardial infarction does not suggest that the patient is at greater risk for sudden death in the future.[1] However, those patients who develop late ventricular fibrillation while in the hospital do represent a very high risk group for recurrent suddent death.[2,3] It is for this reason that we feel that Holter monitoring should be considered in the uncomplicated myocardial infarction. It is our opinion that those patients with uncomplicated myocardial infarctions who have complex arrhythmias greater than 72 hours after their infarction should undergo routine Holter monitoring. Complex ventricular arrhythmias include multiform premature ventricular contractions, coupling or triplets, frank ventricular tachycardia, and R on T phenomenon. All of these patients should undergo Holter monitoring so that if these complex forms persist, prophylactic antiarrhythmic therapy for sudden death could be started. It is also known that those patients with anterior myocardial infarction have a much greater risk of sudden death than do other patients.[4] Therefore, it is our suggestion that all patients with anterior myocardial infarction routinely undergo Holter monitoring prior to discharge; while with acute inferior myocardial infarction, it is necessary only to perform Holter monitoring if complex ventricular arrhythmia has been noted more than 72 hours after the acute event.

Should a Cardiac Catheterization Be Performed Prior to Discharge?

We feel that the only indication for catheterization post-infarction should be a mechanical event that may need repair, a positive stress test post-infarction, continuing angina, or refractory left ventricular failure. There appears to be little or no rationale for routine catheterization post-infarction. It is possible that the anatomy may be somewhat distorted due to the presence of coronary artery thrombosis in the peri-infarcted period.

Should a Stress Test Be Performed In the Patient With an Uncomplicated Myocardial Infarction?

Years ago, the treatment of myocardial infarction consisted primarily of six to eight weeks of absolute bed rest. Over the last decade, this has gradually changed to the point that patients are now being ambulated very early in their course. It has been suggested by many authors that there is no significant risk of performing a modified stress test in the post-infarction period. Generally, the stress tests are performed 10-14 days post-infarction and are limited to exercise that produces a rate of 130 beats per minute. If this heart rate cannot be achieved due to the effect of beta blockade or symptoms, then the stress test should

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be symptom-limited. Utilizing the results of stressing 210 patients, O'Rourke showed that 62 percent of the patients had no angina or ST segment changes; the remaining 38 percent had either angina or ST segment changes.[5] A patient who develops angina on the treadmill on a post-infarction examination has a 65 percent chance of having exertional angina at the end of one year.[5] The development of ST segment changes alone, however, is not a good predictor of the late development of angina in the first year post-infarction. However, the ST segment changes do suggest some alteration in long term mortality. In one series, those patients who did not develop ST segment changes during a graded exercise test following an uncomplicated myocardial infarction had a 2.1 percent death rate one year after the infarction. However, those patients who develop ST segment changes during the exercise test had a 27 percent mortality at one year.[6] Of those patients who developed ST segment changes on the treadmill after an uncomplicated myocardial infarction, at one year 16 percent had experienced sudden death, 7.8 percent a recurrent myocardial infarction, and 1.6 percent had developed heart failure as a cause of death. It is also of importance that of those patients who develop ST segment changes on the treadmill, 54 percent will have multivessel coronary disease. Those who develop angina with or without ST segment changes, have a 60 percent chance of having multivessel coronary disease. In patients who have both angina and ST segment changes, there is an 88 percent incidence of multivessel coronary disease. Recent reports of both the VA Cooperative Study on the chronic, stable angina patient and a European Collaborative Study have shown that patients with triple vessel disease, as well as left main coronary artery disease, may have increased longevity after coronary bypass surgery.[7,8] Thus, it is felt that the appearance of angina or ST segment changes in the post-infarction period may help to identify those patients who are at high risk of coronary disease that may benefit from surgery so they may undergo diagnostic cardiac catheterization.

It is our opinion, in the absence of mitigating circumstances, such as difficulty in walking, etc., all patients who have sustained an uncomplicated myocardial infarction should undergo routine stress testing in the post-infarction period.

DRUG THERAPY IN THE UNCOMPLICATED MYOCARDIAL INFARCTION

While often considered routine, drug therapy in the uncomplicated myocardial infarction is not without controversy. Almost everyone would agree that these patients should be given analgesics for relief of pain, sedatives to relieve anxiety and antiarrhythmic therapy when appropriate. The use of prophylactic lidocaine has gained some acceptance, particularly in hospitals where arrhythmia surveillance may be less than adequate.[9,10] In more modern coronary care units with well trained nursing personnel that promptly institute therapy, prophylactic lidocaine therapy is less widely used. What other drugs should be given routinely to the uncomplicated myocardial infarction patient?

Should Long-Acting Nitrates Be Given Routinely?

In general, long-acting nitrates should not be given routinely to uncomplicated myocardial infarction patients. There is little evidence that nitrates decrease the size of the infarction and they can have detrimental effects in the setting of an uncomplicated infarction. Since these patients do not have clinical evidence of congestive heart failure, their left ventricular filling pressure is not elevated in most cases. If they are given long-acting nitrates, which exert their effect primarily by venodilation, the left ventricular filling pressure will decrease. This could result in decreased cardiac output and, in a select group of patients, frank hypotension. While this severe effect is not seen frequently, the effects on myocardial blood flow are so dramatic that long-acting nitrates should be used with caution in those patients with acute infarction and no congestive heart failure or continued angina.

Should All Uncomplicated MI Patients Be Given Anticoagulants?

The use of anticoagulants has long been a topic of controversy in cardiology circles. Probably nowhere in cardiology is the concept of expected gain from therapy vs. possible drug toxicity more evident than in this area. The problem here is that even with no therapy, the incidence of thromboembolic phenomena, systemic or pulmonary, is quite low. When emboli do occur, they are more likely to be seen in complicated infarctions with decreased cardiac output and prolonged bed rest. The uncomplicated infarct patient has a

low incidence of thromboembolic phenomena. Thus, full dose anticoagulation in this setting probably creates more problems than it prevents.[11-13] Recently many authors, most notably Braunwald in his excellent cardiology text, have advocated low dose heparin in these patients.[14] While this has not been proven effective by large scale randomized trials, it is probably an acceptable compromise.

Should Beta-Adrenergic Blocking Drugs Be Given Acutely to the Uncomplicated MI Patient?

The use of beta-adrenergic blocking drugs given early to protect myocardium has some grounds, at least on a theoretical basis. The evidence to date, however, is inconclusive.[15] The problem in developing such evidence has been the difficulty in infarct sizing and getting large enough patient populations to determine if there is indeed a difference in infarct size. While it has been shown to be relatively safe to use these drugs in the setting of an acute infarct, they probably should not be given routinely until more conclusive evidence appears. Instead, beta-blocking drugs should be reserved for the patients with persistent pain. However, patients who are already taking these drugs on admission to the coronary care unit should continue them unless complications arise such as marked bradycardia, AV block or congestive heart failure.

Should the Uncomplicated Infarct Patients Be Given Long-Term Beta-Blockers?

The evidence that long-term beta-adrenergic blocking agents increase survival in patients after myocardial infarction is mounting.[16-25] Two large, randomized trials, one with practolol[17] and one with timolol,[16] showed an increased survival in treated as compared to untreated patients. With practolol, the improvement was seen only with anterior infarctions.[17] The site of infarction did not affect the results with timolol therapy. Two recent studies using metoprolol[24] and propranolol[25] have also demonstrated a reduction in deaths, particularly sudden death, in patients receiving therapy. The propranolol study, in which propranolol 40 mg or 60 mg was given three times daily, also gave some idea of the effective dosage range for these drugs. Thus, long-term beta-adrenergic blocking drugs should be given to patients after an uncomplicated myocardial infarction if there are no contraindications such as hypotension, symptomatic bradycardia, insulin dependent diabetes, bronchospastic lung disease or congestive heart failure.

Should All Patients Go Home On Long-Acting Nitrates?

Long-acting nitrates are used primarily to prevent angina. There is no evidence that they improve survival. Their use should be restricted to patients with angina. All patients should, however, receive nitroglycerin along with instructions in its use.

What Is the Role of Antiplatelet Drugs After an Uncomplicated Infarction?

Many studies have been done to assess the efficacy of antiplatelet drugs for reducing mortality. Overall, there probably is some reduced mortality in treated as compared to untreated patients. However, the difference is small, on the order of one to two percent, and only a few trials have been large enough to show a difference that approaches significance. Additionally, the difference occurs in the first seven to eight months post-infarction and not all trials have been restricted to this time period. However, even with these problems, the data support their efficacy for improving survival after infarction.[26-29] The difficulty lies more in deciding which of the antiplatelet drugs to use: sulfinpyrazone, persantine or aspirin. There have been no studies comparing these drugs so other factors must help in making the decision. The cost of one month's supply of persantine, 25 mg TID, is about $25; sulfinpyrazone, 200 mg QID, is about $25; and aspirin, 1/2 tablet daily, is less than $1. The low dose of aspirin recommended comes from a report which showed that the higher doses usually employed had the beneficial effect of inhibiting ADP mediated platelet aggregation, but also inhibited prostacycline release. Prostacycline is a potent vasodilator as well as an inhibitor of platelet aggregation. Lower doses of about 2 mg/kg/day (about 1/2 an adult aspirin) had the beneficial effects without the detrimental effects.[30]

Until studies are published which show one platelet inhibitor to be better than another, low dose aspirin for the first seven to eight months post-infarction would be the simplest, least expensive therapy in the uncomplicated infarct patients.

WHAT REHABILITATION SHOULD BE ACCOMPLISHED IN THE HOSPITAL?

The rehabilitation of the uncomplicated infarction patient in the hospital is extremely important. The usual length of stay is approximately 10-14 days. During this time, the patient should begin a variety of activities to determine his response to exercise. Activities should be of low intensity (2-3 METS) during the initial phase.

Energy expenditure can be described in terms of METS (one MET is equal to the energy expenditure per kilogram of body weight per minute of an average individual sitting quietly in a chair or lying at rest). Some of the activities of daily living which require one MET are the following: complete bed rest, dangling the feet at bedside or sitting in a chair. Using the bedside commode requires three METS while using the bedpan requires a greater energy expenditure of four METS. Therefore, using the bedside commode would use less energy than using the bedpan. Complete showering requires three and one-half METS. Partial bathing at the bedside requires two METS and, therefore, can be instituted early in the patient's progressive ambulation program. As soon as the patient is stable, a progressive ambulation program involving low intensity dynamic exercises and walking should be instituted. Persons with other physical handicaps should be evaluated individually as to their progression of activity. Propulsion of a wheelchair requires two METS and this activity could begin early in an ambulation program; however, a person requiring braces or crutches for ambulation (six and one-half METS) would have to have their activity progressed more slowly.[31-34]

Before the patient leaves the hospital it is extremely important to give him specific exercise instructions for home. A walking program which progressively increases the speed and distance covered is recommended. Discharge exercise instructions should begin where the in-hospital activity ends. At discharge, the patient should be walking at least 250 to 300 yards or more three to four times daily.

The patient's functional cardiac capacity also should be estimated. (Refer to Table 1, The Functional and Therapeutic Classifications of Patients with Disease of the Heart developed by the American Heart Association.) Class I patients should be able to attain a maximum of 6.5 METS. These patients have no limitation on their physical activity and should be able to walk a mile in 12 minutes (or five miles per hour). Patients in Class II should be able to attain four and one-half METS. These patients have slight limitation of their physical activity. In other words, they are comfortable at rest but ordinary physical activity usually results in fatigue, palpitations, dyspnea or angina pain. These patients should be able to walk a mile in 15 minutes (or four miles an hour). Patients in Class III should be able to attain three METS. These patients have marked limitation of their physical activity. They are comfortable at rest but less than ordinary physical activity causes fatigue, palpitations, dyspnea or angina pain. These patients should be able to walk a mile in 20 minutes (or three miles per hour). Patients in Class IV should be able to attain one and one half METS. These patients are unable to engage in physical activity without discomfort. Symptoms of cardiac insufficiency or angina may even be present at rest. Also, in preparing a discharge exercise program, the patient's previous physical conditioning and lifestyle need to be evaluated thoroughly.[33]

TABLE 1.
THE FUNCTIONAL AND THERAPEUTIC CLASSIFICATIONS OF PATIENTS WITH DISEASES OF THE HEART
American Heart Association

FUNCTIONAL	MAXIMAL METS	PHYSICAL ACTIVITY	AMBULATION
CLASS I	6.5	No limitations	1 mile/12 min. 5 MPH
Class II	4.5	Comfortable at rest — symptoms from ordinary activity	1 mile/15 min. 4 MPH
Class III	3	Symptoms from less than ordinary activity	1 mile/20 min. 3 MPH
Class IV	1.5	Discomfort with activity — may have symptoms at rest	

When Should the Patient Return to Work?

A person who has previously been in good physical condition and has been following a regular exercise program can more readily return to his normal functional state. The individual's type of work needs to be evaluated in designing an exercise program for returning to work. For example, a sedentary worker or office worker with an uncomplicated infarction can return to work in approximately a month. A person who is a heavy equipment operator should return to work in approximately eight weeks post-infarction.

The suitability of the job is an important variable to consider in returning to work. What are the average eight-hour requirements of the job? Are there certain periods during the eight hours that would require above normal energy expenditures? For example, a restaurant worker might have peak periods around the meal hours and then have slack periods during the other hours of the day. It would be important to evaluate whether or not this person would be able to take rest periods if he/she did incur angina. The consequence of syncope and/or sudden death would also need to be explored with respect to endangering the lives of others.[33,35]

Physical considerations of the job would also need to be determined. Does the person have to travel for long periods before arriving at work? If so, is he responsible for his own transportation or would he be a passenger with someone else (thus allowing for rest time)? How much walking and/or stair climbing is involved on the job and would the person be able to rest if he did have angina while working? Also, it would be important to know if lifting, pushing, pulling or remaining in a cramped position for long periods of time would be involved. We recommend no lifting over 10-15 pounds for the first two to three weeks after discharge. After that time, either a submaximal or, later on, a maximal exercise test can be done to determine more specific limits for weight-lifting. Exercise involved in performing the patient's job needs to be determined. For example, would the patient be doing a lot of isometric vs. isotonic exercise? Isometric exercise increases myocardial demands much more than isotonic exercise. Certain environmental considerations on the job are also important. Extremes of heat, cold, humidity and altitude should be determined because any one of these could precipitate angina. Excessive emotional tension may develop on the job. If this is identified, relaxation techniques could be taught the patient. Biofeedback may also be an alternative treatment to relieve this problem. Overtime and various types of machinery that may be involved on the job could prove dangerous and should be evaluated thoroughly. A person who works in a high, unprotected location would probably have to wait longer to return to work than someone working in a less dangerous location. The safety of others must always be considered.[33,35]

When Can a Patient Begin Driving a Car?

How soon they can return to driving is a question uppermost in many patients' minds. Usually the first week that the patient is home he can ride in a car with someone else. The second week he can begin driving for short distances if he is not having symptoms such as increased chest pain or syncope. Driving a car requires two METS of energy expenditure. This is a level usually attained following a progressive activity program in the hospital.[31,33] Unanticipated activities which could occur while driving a car include changing a tire (isometric exercise) and involvement in an accident or car breakdown which could leave a person stranded in extremes of temperature.

When Should a Patient Resume Normal Sexual Activity?

Another subject to discuss with the patient is the resumption of sexual activity. Many patients fear that the resumption of sexual intercourse will result in another heart attack. The actual amount of physical energy expended during sexual intercourse (average 3.7 METS) is equivalent to such every day household tasks as scrubbing the floor or climbing a couple of flights of stairs. This is well below the energy demands of most jobs which average 5 to 6 METS. The average heart rate during the orgasmic phase of the sexual response is 117 beats per minute which is slightly less than that recorded for a period during normal workload which is 120 beats per minute. (The rate two minutes before orgasm is 87 beats per minute and two minutes after orgasm, the rate is 85 beats per minute.) Blood pressure readings recorded for an average resting level of 126/85 mm of mercury can be compared to 145/87 mm of mercury which was measured during the peak of sexual activities. The time engaged in sexual activities is usually brief. Most researchers agree

that sexual activity can be compared to other forms of exercise and should be treated accordingly. Even though the risk of infarction and sudden death do exist in intercourse, this is rare and can often be associated with happenings in unfamiliar surroundings involving other than usual partners or after consuming a large meal or considerable alcohol. Patients should be counseled that during sexual intercourse, skin becomes flushed and breathing, pulse rate and blood pressure increase. These should all return to normal levels after the resolution phase or within 10 minutes. Angina and palpitations may occur in the resolution phase. If this is a problem, patients should be instructed to take prophylactic nitroglycerin. If this does not relieve the angina, they should be encouraged to report this on the next follow-up visit so that medicine can be adjusted to alleviate the problem.[36]

Although caring for the uncomplicated myocardial infarction patient may be less exciting than some other aspects of medical practice, it is not without rewards. Newer techniques have been developed for evaluating these patients and the risk of future events can be determined. Drug therapy can reduce the incidence of sudden death and, most important, proper instruction of the patient in his own rehabilitation can mean the difference between a cardiac cripple and a productive member of society.

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EDITORIAL

Vasodilators and Heart Failure

Alfred Kahn, Jr., M.D.

The treatment of congestive heart failure has improved through the years. The standard therapy used to be digitalis. Later it was digitalis and diuretics. In the more recent past these two modalities have been supplemented by the use of vasodilators. There are numerous articles in the literature attesting to the benefit of using vasodilators for congestive heart failure. There is an excellent symposium on congestive heart failure — and the use of vasodilators — in the *American Journal of Medicine* (volume 71, page 131), introduced by C. Richard Conti. Much of the symposium discusses effects of the commonly used drug Prazosin (Mini-Press) (Pfizer). Conti points out that George Burch probably was the first to call attention to the use of vasodilators as far back as 1956. He used Hexamethonium, which many of the older physicians will recall as Methium — probably the first really effective drug for very severe hypertension; for many physicians, it was the first viable alternate to bilateral thoracolumbar sympathectomy in severe hypertension.

Dr. Jay N. Cohn, in this same symposium on vasodilator therapy for heart failure, has reviewed the physiologic basis for vasodilators as Prazosin. Dr. Cohn states that congestive heart failure probably has a sympathetic nervous system component which causes arteriolar narrowing and decreased arterial compliance; this, in turn, decreases the left ventricular ejection fraction. The vasodilator drugs tend to relax the vascular tone, according to Dr. Cohn, and this, in turn, improves both myocardial metabolism and the hemodynamic balance of the patient. Prazosin not alone decreases the tone in the arterial tree, but also induces a relaxation in the venous system which permits the blood to shift, so to speak, in the periphery of the body and thus diminish the end-diastolic volume on both the right and left side of the heart. As Dr. Cohn points out, you could say it in the following manner: "The reduction of ventricular volume in both systole and diastole should have several benefits: (1) A reduction in ventricular and end-diastolic pressure, and, therefore, a decrease in pulmonary and systemic capillary pressure that should relieve edema formation; (2) a shift to a flatter portion of the ventricular diastolic pressure: volume relationship, so that larger volume increments during diastole can be accommodated with a smaller increase in pressure; (3) a reduction in myocardial wall stress, and, therefore, a decrease in myocardial oxygen consumption; (4) improved diastolic perfusion of the myocardium; and (5) perhaps a reduced stimulus for myocardial hypertrophy." Other drugs beside Prazosin which have been tried for this same result include Sodium Nitroprusside, Phentolamine, nitrates, Hydralazine, certain enzyme inhibitors, Minoxidil, etc.

Chatterjee, Rubin, Ports, and Parmley, writing in this same symposium, reported on the specific use of oral Prazosin. They felt this drug was quite beneficial in severe chronic congestive heart failure. They found it increased the cardiac output and stroke volume at exercise, but not at rest. They state that these improvements occur — but they do not seemingly influence the amount of oxygen consumed. This latter fact is very interesting — and they specifically state "despite significant increase in cardiac output, oxygen consumption did not change" in patients who were exercised while under the treatment with Prazosin. Left ventricular performance was considered to be improved because stroke volume increased and there was a lesser increase in left ventricular filling pressure — with exercise — when under the influence of Prazosin. They reported that in some cases patients with chronic heart failure do not

have an improvement in exercise tolerance after being treated with Prazosin. In some cases the initial beneficial effect of Prazosin on heart failure seems to disappear.

In the same symposium is an article on short and long-term therapy using Prazosin for congestive heart failure by Rouleay, Warnica, and Burgess. The specific aim of their work was to throw some light on whether Prazosin was useful over a long period of time as a vasodilator and secondly to try and gain a better understanding why Prazosin seemed to partially lose its effect in some patients. These authors feel, based on their cardiac hemodynamic studies, that Prazosin does cause an immediate hemodynamic improvement. They further state that their studies demonstrated "a sustained hemodynamic improvement after 24 hours." They report an acute clinical deterioration in the congestive heart failure patients when Prazosin therapy was stopped. They felt that the addition of spironolactone was helpful in causing a continued beneficial effect from Prazosin.

The last article in the symposium was by Awan, Needham, Evenson, Amsterday, and Mason. It concerned itself with Prazosin in chronic refractory congestive heart failure — with specific interest in the matter of tolerance and tachyphylaxis. Much of their article deals with the specific laboratory findings documenting the acute improvement in congestive heart failure using Prazosin; they also studied the long-term effects of the use of Prazosin as evaluated by Echocardiography and as measured by exercise tolerance — and the effect on symptoms. Their results document improvement in their group of patients resulting from a relatively equal dilatation of the arterial tree and venus system. As time went by, they found that 30% of their patients needed a larger dose of Prazosin to maintain the improvement. They report that this is due to the development of true vasodilator tolerance. The mechanism of this vasodilator tolerance has not really been determined. One explanation they give of so-called tachyphylaxis is that Prazosin is an Alph I receptor blocking agent — and does not have much effect on the Alpha 2 receptor. This causes a build-up of norepinephrine level in the presynaptic area, ultimately leading to stimulation of the Alpha 2 receptors. This, in turn, sets up a train of activity which would, in effect, reduce the effectiveness of Prazosin.

All in all, the use of vasodilators in congestive heart failure promises to be a very helpful means of treatment provided that the effect of Prazosin and other related drugs does not progressively diminish with the duration of usage of the drug.

"From Other Years"*

Journal of the Arkansas Merical Society

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REPORT OF A CASE OF CLEFT PALATE, CLOSED AT THE ALVEOLAR PROCESS, IN AN INFANT DURING THE FIRST MONTH

By Geo. F. Haynes, M.D.,
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(Read by title in the Section on Surgery at the Sixteenth Annual Session of the State Medical Society of Arkansas, held at Hot Springs, April 29, May 1, 1891.)

In this case the lack of development had left a fissure between the palatal portion and the incisive portion of the left superior maxillary bone which, extending posteriorly, made a case of complete cleft palate. This cleft became central in the soft palate, so that the uvula was divided and hung in two parts in the pharynx. The resultant condition was that the left naris and the mouth were one cavity. The accompanying hare-lip made the deformity one that was not only unsightly but by exposing so large an aperture during respiration left the patient exposed to nasopharyngeal, laryngeal and bronchial inflammations. The closure of the hare-lip was imperative, and by recent authorities early operative interference is indorsed, but the idea of attempting anything further is no where spoken of, so far as I am aware, until the child has reached the age of 3 or 4 years. What was done in this case besides the closure of the hare-lip was as follows: The edges of the cleft in the anterior portions of the superior maxilla — the alveolar arch — were freshened by removing with a bistoury a strip of soft tissue. A strong suture of silver wire was in-

*From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

serted in the space between the lateral incisor and canine and carried to the opposite side where the inter-incisor space was pierced, approximation was obtained by the pressure of the thumb on either cheek, the suture drawn tight and twisted. Apposition was such that union of the soft parts was expected, and such was the result. The twisted wire ends were bent down so as not to lacerate the lip or tongue; closure of the hare-lip with pin suture was done at once. Immediate gain was a more shapely mouth, a better gum over which to close the lip. The remote gain will be great, for when at the age of 3 or 4 years uranoplasty is done the extent of the cleft will be so much lessened as to very much simplify the procedure. The patient was 19 days old at the time of the operation, which was done without anesthesia. He is now doing well, though nourished artificially, has taken milk from a spoon, as he has at no time had the ability to suck.

MEDICINE IN THE NEWS



THE MONTH IN WASHINGTON

Federal health programs would be hard-hit under the budget resolution that House Republicans, bolstered by conservative Democrats, managed to push to a "second-try" victory.

The budget vote of 220-207 was a major win for the Reagan Administration which had supported the GOP budget plan before the House. Since the Administration also had backed the Senate budget, the final outcome on the budget resolution will be satisfying to the Administration.

The big question, however, was whether the authorizing and appropriating committees this time around will abide by the budget restrictions contained in the resolutions.

The next step is for House and Senate conferees to agree on a compromise version of the budget that can win approval in both Houses.

On the broad scale, the House bill called for a $100 billion deficit next fiscal year, while the Senate bill contemplated a $116 billion deficit. The original Administration budget proposed a $122 billion deficit.

The House budget would freeze at current levels spending on discretionary health programs. Medicare projected outlays would be trimmed by $11.5 billion over the next three years; Medicaid, by $6.6 billion. The Senate budget reductions for the same period were $17.9 billion and less than $3 billion.

The final House Medicare figure was some $12 billion below the three-year-cut level of $23 billion contained in the GOP budget package that was voted down when the House first brought up the budget issue early in June only to have all plans before it turned down. The Republicans toned down the Medicare cuts and made other adjustments to help secure the votes for passage when the House brought up the budget for the second time.

Although the willingness of the respective committees to go along with the budget proposals remains in doubt, there is no question that the passage of the budget resolution puts increased pressures on the lawmakers to make large economy provisions for Medicare and Medicaid. Most of the Medicare "savings" in the two budget measures, which are fairly similar in this respect, come from reimbursement restrictions such as prospective payments to hospitals, delaying the annual physician fee screen by three months, elimination of the nursing differential, and bringing federal employes into Medicare for the first time (collecting several billions of dollars in Social Security taxes).

* * * *

Congress continues to move step-by-step closer to the enactment of cutbacks in Medicare despite wide concern with voter reaction in this election year.

Demonstrating that state-of-the-economy sentiment and worry over budget deficits remain a paramount concern, Congress agreed on a budget resolution calling for deep reductions in projected Medicare expenditures. The Senate Finance Committee quickly followed up with legislation to carry out the cuts.

A favorable vote in the Republican-controlled Senate appears to have a good chance. But the House, in Democratic hands, might balk.

Most of the major health provider groups are lined up to fight many of the reductions with the argument that the cuts will force providers to shift more costs to the private sector patients. The American Association of Retired Persons also is preparing an all-out campaign against the economy moves.

The congressional budget resolution adopted after a long struggle called for $13.6 billion less spending for Medicare over the next three fiscal years than would occur without legislative changes. Medicaid would be trimmed by $2.2 billion. Discretionary health programs face a $3.4 billion loss over three years. For the most part, these "cuts" would not diminish spending from this year's levels; rather, the rate of increase would be pared.

The Senate Finance Committee showed it meant to hew the budget line by voting 13-6 for Medicare and Medicaid budget slashes as the first in a series of votes the committee is taking to carry out its responsibilities over a large share of the federal budget, including taxes.

One of the larger Medicare cuts made by the Finance Committee would have a direct impact on physicians' fees. The committee agreed to a proposal to provide no increase in the economic index for fees next fiscal year and only a five percent increase the following fiscal year. This was much tougher than the Administration's original proposal to hold down the index next fiscal year to 5 percent. Some $320 million would be saved by this proposal, the panel estimated.

In addition, the special 100 percent reimbursement rate for inpatient radiology and pathology services would be reduced to 80 percent of reasonable charges after satisfaction of the annual deductible.

Another provision of the bill tightens reimbursement for hospital-based physicians. The amount Medicare will recognize as the reasonable cost of physician services to providers would be limited. The Health and Human Services (HHS) Secretary was directed to issue regulations specifying conditions for reasonable charge payments which deal with the differences between medical specialties, particularly radiology, anesthesiology and pathology.

Medicare liability would be based on the lower of the actual cost of services to the provider or a reasonable compensation equivalent.

The committee voted to prohibit reimbursement for assistants at surgery in hospitals with a surgical training program except under such medical circumstances as team physicians performing complex procedures such as coronary bypass operations; or concurrent care when a medical specialist also provides or is available to provide care during a surgical operation if the patient has another condition requiring care that the surgeon is unable to perform.

The brunt of the economies would be borne by hospitals. A more restrictive reimbursement formula for routine bed, board and nursing costs would save $670 million next fiscal year starting Oct. 1. The limitation would include ancillary costs such as lab services, X-rays, drugs, etc. The HHS Department was directed to come up with a prospective reimbursement plan within a year.

The private room "subsidy" would be eliminated.

One of the larger savings — $750 million — comes from a bookkeeping provision delaying final reimbursement for hospitals from the end of the current fiscal year until the next fiscal year.

Larger employers — those with 25 or more workers — would be required to offer employees aged 65 through 69 private medical insurance that would be first payor ahead of Medicare, estimated to save the government program more than $300 million a year.

The issue of bringing federal employees into Medicare and making them pay the Medicare tax, an Administration proposal, will be taken up later by the Committee. This would bring in $600 million to the Medicare fund.

The most sweeping Medicaid provision allows states to require beneficiaries to pay nominal copayment amounts ranging from 50 cents to $3.00.

Exempt would be ambulatory services for children and pregnant women.

* * * *

Major providers and insurers of health care registered sharp differences of opinion before Congress on the best approaches to dealing with the problem of rising Medicare costs and health care inflation generally.

The rifts appeared as the House Ways and Means Subcommittee opened hearings on proposals to save money in the Medicare and Medicaid program.

The subcommittee has before it the Reagan Administration's proposals to achieve savings in Medicare through a number of provisions, a fairly similar set of recommendations accompanying the House-passed budget, and plans offered by organized labor, the health insurance industry, and the American Hospital Association (AHA).

William Felch, M.D., a member of the American Medical Association Council on Legislation, urged the subcommittee to use "extreme caution against undue cost-shifting" as it considers savings plans. Dr. Felch said that "dollar savings that are made from one pocket that just generate commensurate expenditures from another pocket are, at best, illusory. At worst, they can create hardships for some beneficiaries — a situation we all want to avoid."

The AMA witness criticized the proposed programs put forth by the AHA and the Health Insurance Association of America (HIAA) this year. Noting that the AMA has supported prospective Medicare reimbursement for hospitals on an experimental basis, Dr. Felch said "it is another thing, however, to propose a single prospective reimbursement mechanism, such as that proposed by the AHA, to be imposed nationwide without any track record to justify it."

The AHA plan "could create serious inequities and disparities among hospitals and beneficiaries," according to the physician. "It has the potential for creating a two-class hospital system, with disruption in the physician-patient relationship," he said. Hospitals could be placed "at severe risk of inadequate funding based on budget demands," said Dr. Felch.

Turning to the HIAA plan, the AMA witness said it "looks to the single element of health care payment and fails to recognize other equally important issues such as the actual delivery of health care."

"Certain elements of the HIAA proposal appear to be little more than a reiteration of the discredited hospital cost containment plan that was considered by Congress during the Carter Administration," he said.

Declared Dr. Felch:

"Neither the AHA proposal . . . nor the HIAA proposal is an appropriate answer to Medicare's short or long-range problems. In the AMA's long-range development of national health policy, we have asked both the AHA and the HIAA to join with us. Through such cooperation we hope to be able to present Congress with a series of proposals that will work to resolve the short-term needs and offer solutions for the long-range needs."

The Federation of American Hospitals weighed in with strong criticism of the HIAA plan. FAH Executive Director Michael Bromberg issued a news release asserting that "the commercial health insurers' package of proposals is a classic example of a large industry trying desperately to use government to solve its problems."

Bromberg said commercial health insurers "are looking for a government bail-out of their industry. They also are trying to shift the losses they've incurred from fewer customers onto the shoulders of the hospital industry."

At the hearing, officials of AHA and HIAA briefly summarized their proposals. In addition, labor officials assailed the Administration's projected cutbacks and urged adoption of their sweeping price control, cost containment plan.

The AMA's Dr. Felch testified that "without a rethinking of how government should be involved with health care in this country Medicare and other governmental health care programs will only become large burdens that could further weigh upon the national economy."

He said this is why the AMA has embarked on a long-range study of federal health programs, "with an ultimate goal being the development of a national health policy."

For short-term purposes, the AMA recommended a list of Medicare program changes, including repeal of mandated state facility review, changes in reimbursement for inpatient radiology or pathology services, extension of the Medicare tax to federal employees, making Medicare second payor for the working aged, indexing the Part B deductible, repeal of the Professional Standards Review Organization program, coinsurance for

home health services, elimination of the three-day prior hospitalization requirement for skilled nursing care, and elimination of the provider waiver of liability for uncovered Medicare services.

* * * *

The AMA has renewed its request that the Internal Revenue Service (IRS) treat hospital-associated physicians as independent contractors.

The issue "goes to the very heart of professionalism," said Jerald Schenken, M.D., a member of the AMA's Council on Legislation. Dr. Schenken told a House Ways and Means Subcommittee that there is no attempt by hospitals "to exercise any control or interfere in any way with the physician's independent exercise of medical judgment on behalf of an individual patient."

Dr. Schenken, who also was testifying on behalf of the American College of Radiology, the American College of Emergency Physicians, and the College of American Pathologists, noted that historically hospital-associated physicians have been considered by the IRS to be independent contractors under the common law "test of control" rules and have not been considered employees of hospitals.

In the late 1960's, the IRS began to enforce, often arbitrarily, a more stringent interpretation of the common law rules and attempted to reclassify many independent contractors, including physicians, as employees, according to Dr. Schenken.

In 1978, Congress imposed a temporary moratorium on IRS rulings on the issue. The current moratorium is due to expire next month. Legislation has been introduced to clarify the status of independent contractors. The AMA proposed amendments to the legislation to prevent "further unwarranted reclassification of physicians as employees" that "would disrupt long-standing independent contractor relationships."

* * * *

The American Medical Association charged that legislation before Congress to change tax treatment of pension plans is "highly discriminatory" against professional service corporations.

In a statement to the House Ways and Means Committee, the AMA said the measure (H.R. 6410) "imposes unequal and inequitable treatment on professionals, their employees and certain other providers of personal service."

The bill before the Committee, subject of a one-day hearing recently, reduces the maximum contribution to a defined contribution plan by one-third (to $30,000), reduces benefits from defined benefit plans (to $90,000), and eliminates the annual cost-of-living increases in these maximum allowances. Retirement plans for professional service corporations would be subject to the same rules as Keogh plans which would be liberalized by increasing the annual contribution limit to $30,000 a year.

The proposal was brought up less than two months ago. It has stirred a torrent of criticism from the business and professional communities. Full page advertisements appeared in leading newspapers recently featuring an open letter to President Reagan warning that "a disaster threatens America's private pension plans." The letter was signed by officials of the Chamber of Commerce of the United States, the National Association of Manufacturers, the National Small Business Association, the ERISA Industry Committee and the Association of Private Pension and Welfare Plans.

The Administration told the committee that the amount of tax-deferred income corporate pension plans provide executives is "overly generous," but at the same time it urged the lawmakers to proceed cautiously to avoid cut-backs in benefits for rank-and-file employees.

Assistant Treasury Secretary John Chapoton testified that reduction of the limits on tax-deferred contributions "will make it easier to raise the level of deductible contributions to plans benefitting self-employed individuals . . . (and) facilitate the effort to achieve parity between corporate and noncorporate plans."

Chapoton did not specifically back the legislation, sponsored by Rep. Charles Rangel (D-NY), but he indicated general support.

The AMA favored the lifting of the Keogh plan limit to $30,000, but told the committee that the proposed changes involving Keogh and professional corporations "do not equalize the treatment of self-employed persons and corporate employees."

"Furthermore, the bill subjects shareholders in professional corporations to the Keogh plan limits on contributions and benefits and therefore discriminates against professional service corporations in an unjustified manner."

Under present law, the AMA pointed out, any self-employed person can achieve equality with corporate employees by incorporating his busi-

ness or professional practice and adopting a corporate pension plan. The Rangel bill would remove this opportunity for professionals by applying the Keogh plan limits to corporations which perform services "in the field of health, law, engineering, architecture, accounting, actuarial science, performing arts, athletics or consulting."

The AMA said "thus the bill for no apparent logical reason discriminates against professionals and their employees by denying them opportunities available to all other individuals regardless of whether they are employed by others or in business for themselves. It would be unique in pension law to create a classification based solely on the 'product' produced by the business."

The effect of the bill is that of a tax-increase proposal "that is inconsistant with the publicly-supported Administration philosophy to reduce or maintain at present levels the amount of taxes to which a person is subjected," said the AMA.

* * * *

The government is readying a potent new weapon to crack down on people who abuse Medicare and Medicaid.

Proposed regulations soon will be printed in the Federal Register to carry out a section of a 1981 law that establishes a civil fraud division in the Inspector General office at the HHS Department.

The ability to proceed against abusers by the civil as well as criminal route is regarded by the IG's office as giving the government much broader powers to punish providers and patients involved with false exaggerated claims.

The law gives the government authority to assess a $2,000 fine for every false claim or statement submitted, whether or not it was accepted by Medicare or Medicaid for payment. Legislation is before the Senate (S. 1780) that would increase the penalty to $10,000 per count and give the IG added powers.

Under the law, civil penalties may be assessed upon criminal conviction in federal or state courts.

However, the major thrust of the new civil fraud division will be against people who, for one reason or another, are not prosecuted criminally. In this event, the prosecution, investigation and judgment will be handled "in house," within the HHS Department without recourse to the courts. Administrative law judges will hear the cases. The final decisions will be signed off by the HHS Secretary. The appeal would have to be to the U. S. Court of Appeals.

An HHS official said the department will move with extreme care and caution to ensure that due process is followed in the administrative proceedings.

A 30- to 60-day period will be allowed for comments on the regulations.

* * * *



RESOLUTIONS

DR. JOHN W. COLE

WHEREAS, the members of the Hot Spring County Medical Society note with sincere sorrow the death of an esteemed member, John W. Cole, M.D., and

WHEREAS, Dr. Cole had committed himself and his medical expertise to his patients and his community for many years; and

WHEREAS, he was active in community and state affairs, having served on the State Board of Education for eighteen years.

BE IT THEREFORE RESOLVED:

THAT, this resolution be made part of the permanent archives of this Society; and

THAT, a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication; and

THAT, a copy of this resolution be sent to Dr. Cole's family as an expression of our heartfelt sympathy.

By Order of the
Hot Spring County Medical Society
Russell Cobb, M.D., President
N. B. Kersh, M.D., Vice-President
Michael G. Justus, M.D., Secretary

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

ADVANCED CARDIAC LIFE SUPPORT PROVIDER COURSE

Anthony R. Giglia, M.D., Director; Coordinator: Janet S. Calliham, R.N., C.C.R.N., *October 2 and 3.* Sponsored by St. Vincent Infirmary. Contact Coordinator at 661-3683 for information. Registration fee, $70.00. SVI Professional and Nursing Staff, $10.00. Registration deadline: September 20. (Time unknown.)

NUTRITIONAL SYMPOSIUM

October 8th through 10th, DeGray Lodge State Park. Sponsored by UAMS. Time, hours of credit and fees unknown.

RADIOLOGY CANCER THERAPY CONFERENCE

Presented by E. J. Ferris, M.D., *October 16 and 17,* CARTI-St. Vincent Infirmary, Little Rock. Sponsored by UAMS. Time, hours of credit and fees unknown.

PRACTICAL COUNSELING TECHNIQUES FOR THE PRIMARY PHYSICIAN

Presented by John C. Faul, M.D., *October 20 and 21, 7:00 p.m. to 9:00 p.m.,* In-Service Education Building, Baxter General Hospital, Mountain Home. Four hours Category I credit. No registration fee.

TRACHEOSOPHOGEAL PUNCTURE METHOD (SINGER-BLOM) FOR SPEECH

Presented by S. Whetmore, M.D., *November 6, 8:15 a.m. to 5:00 p.m.,* Education II Building, UAMS. Hours of credit and fees unknown.

EMERGENCY MEDICINE UPDATE '82

Presented by the Department of Medical Education, *8:00 to 5:30 November 11, 7:00 p.m. to 1:00 a.m., Basic CPR, 8:00 a.m. to 5:30 p.m., November 12, 7:30 State A.C.E.P. Meeting, 8:00 to 12:00 November 13.*

WHAT YOU ASKED FOR IN FAMILY PRACTICE

Presented by Ben Saltzman, M.D., *November 13,* Arkansas State Health Department Auditorium. Sponsored by UAMS. Time, hours of credit and fees unknown.

SURGICAL EMERGENCIES OF CHILDHOOD

Presented by E. Steve Golladay, M.D., Department of Pediatric Surgery, UAMS, *November 16,* In-Service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, third Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and second Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-Northwest

Medicine Teaching Conference, first and third Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Radiology Conference, first and third Tuesday, 1:00 p.m., Conference Room.
Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.

FORT SMITH — AHEC

Cancer Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL
Pediatric Radiology Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, every other Thursday, 5:30 p.m., Second Floor Conference Room, Pediatric Administrative Building.

LITTLE ROCK — BAPTIST MEDICAL CENTER
Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Radiology Conference, each Tuesday, 4:30 p.m. to 5:30 p.m., Radiology Department.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Auditorium. Six hours Category I credit.
GI Roundup, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Cardiology Conference, October 28, 7:00 p.m. to 8:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, each Thursday except first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Dining Room #3.

LITTLE ROCK — ST. VINCENT INFIRMARY
Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., St. Vincent Infirmary in September; Doctors Hospital in October; St. Vincent Infirmary in November.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S1169 Laboratory.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G-131 A & B.

TEXARKANA — AHEC-Southwest
AHEC Tumor Conference, first Wednesday, 7:00 a.m., Classroom B, St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., Classroom B, St. Michael Hospital.

OBITUARY

DR. W. F. ADAMS

Dr. Adams, a member of the Sebastian County Medical Society, died August 7, 1982. He was born July 15, 1910, in Kerr and received his preliminary education in Little Rock.

Dr. Adams attended the University of Arkansas at Fayetteville and was graduated from the University of Arkansas College of Medicine in 1934. His internship and residency were with St. Joseph Hospital in Lexington, Kentucky.

Dr. Adams was a house physician at St. Vincent Infirmary in Little Rock and an instructor with the College of Medicine. While practicing in Little Rock, he had been a member of the Pulaski County Medical Society. He transferred to Sebastian County in 1937.

In Fort Smith, Dr. Adams practiced obstetrics and gynecology at Cooper Clinic. He was a past president of the Sebastian County Medical Society, a member of the American College of Obstetrics and Gynecology and a member of the Van Buren Rotary Club.

Dr. Adams is survived by three daughters.



PERSONAL AND NEWS ITEMS

MANILA GAINS PHYSICIANS

Manila has two new doctors — Dr. Lynn Porter and Dr. Lewis Lyons, who are associated with Buffalo Island Community Hospital.

DR. TEXTER CHAIRS SESSION

Dr. E. Clinton Texter of Little Rock chaired a session and presented papers on medical research at the Seventh World Congress of Gastroenterology recently held in Stockholm, Sweden. While in Stockholm, Dr. Texter also presented papers at the Fourth International Pirenzepine Symposium and the Fourth GI Hormone Symposium. His trip to Europe included a stop in London, England, where he was a visiting physician at three different hospitals.

DR. DAHLMANN

Dr. Kate Dahlmann has opened an office for the practice of Pediatrics at 209 South Broadway in Siloam Springs.

DR. MABRY MOVES

Dr. Charles Mabry, formerly of Little Rock, has announced the opening of an office at 176 West 42nd Street in Pine Bluff. Dr. Mabry specializes in General and Vascular Surgery.

DR. BUCKNER SPEAKS

Dr. John Buckner of Jonesboro discussed "Computerized Tomography" at a recent meeting of the Jonesboro Exchange Club.

LAKE VILLAGE DOCTOR

Dr. Dan T. Berry has joined Drs. J. H. Burge, John P. Burge, Tom Tvedten, John Russell and Allen Talbot at the Lake Village Clinic.

DR. WILSON PARTICIPATES

Dr. Carolyn Wilson of Mountain Home participated in a program on Hospice at a recent meeting of the Fairfield Bay Permanent Resident Property Owners Association.

DR. PACE LOCATES

Dr. Rose Pace, formerly of Pine Bluff, is now practicing fulltime at the Altheimer Clinic, a satellite of the Jefferson Comprehensive Care Center of Pine Bluff.

DR. STEARNS IN DEQUEEN

Dr. David Stearns, a General Surgeon, has joined the medical staff of the DeQueen General Hospital.

DR. SHANNON COMMISSIONER

Dr. Robert F. Shannon of Little Rock has been appointed Mental Health Commissioner for the State of Arkansas. Dr. Shannon replaces Dr. James Thomas.

DR. MARTIN RETURNS

Dr. Dan Martin, a native of Camden, has opened an office for the practice of Internal Medicine at 416 Hospital Drive in Camden.

CHARITY PARTY

The Russellville Junior Auxiliary recently held a charity ball and auction. At the auction, a dinner party for 21 couples was purchased for $2500. Dr. and Mrs. Stanley Teeter and Dr. and Mrs. Joe Crumpler hosted the dinner party with two other Russellville couples.

TEXARKANA GAINS PHYSICIANS

Dr. John R. Gregory, Orthopaedic Surgeon, has joined the Southern Clinic in Texarkana.

Drs. D. Michael Blankenship and Eric E. Hall have joined the Collom & Carney Clinic Association in Texarkana. Dr. Blankenship specializes in Internal Medicine and Nephrology and Dr. Hall specializes in Obstetrics and Gynecology.

DR. GASTON

Dr. Robert S. Gaston, who specializes in Internal Medicine, has joined Dr. J. William Nuckolls at 1801 West 40th in Pine Bluff.

EMT TRAINING

Dr. Bob Robbins of Lake City and Drs. W. F. Shepherd and F. M. Wilson of Jonesboro participated in a series of seminars for emergency medical technicians and paramedics in Northeast Arkansas and Southeast Missouri.

DR. WESTERFIELD

Dr. Robert Westerfield has opened his office for the practice of Internal Medicine in Morrilton.

DR. SPEER APPOINTED

Dr. Hoy Speer of Stuttgart has been appointed unit chairman of the Cancer Prevention Study II for the Arkansas Division of the American Cancer Society.

DR. KELLEY

Dr. Manuel Kelley has opened his office for General Practice in Marianna. He was formerly a staff physician at the Lee County Cooperative Clinic.

DR. TOMMEY

Dr. Robert C. Tommey has joined Drs. David M. Yocum, Jr., William R. Scurlock, C. Eldon Tommey, John H. Moore and Moises A. Menendez at The Surgical Clinic of South Arkansas in El Dorado.

DR. COLEMAN SPEAKS

Dr. Michael Coleman of Fort Smith spoke at a recent meeting of the Lupus Foundation.

DR. PHELPS IN MONETTE

Dr. Thomas Phelps, formerly of Memphis, Tennessee, has moved to Monette.

DR. HUMPHREYS LOCATES

Dr. T. J. Humphreys has opened an office for general practice in the Doctors Building in Nashville.

DR. McCLARD HONORED

Dr. Helen McClard and her husband, Bob, of Mount Ida were guests of honor at a reception given by the Montgomery County Nursing Home. Dr. McClard opened a clinic at Mount Ida in June.

DR. KLEINHENZ

Dr. Robert W. Kleinhenz has joined Dr. Dale Kincheloe for the practice of General Orthopaedic and Construction Joint Surgery at 133 Arbor in Hot Springs.

DR. MARKS OPENS OFFICE

Dr. Stephen R. Marks has opened an office at 2000 Fendley Drive in North Little Rock. Dr. Marks specializes in Obstetrics and Gynecology.

DR. FEILD APPOINTED

Dr. T. A. Feild of Fort Smith has been appointed to the board of directors of First Federal Savings and Loan in Little Rock.

DR. HAYES

Dr. Richard Hayes, formerly of Beebe, has joined the Crestview Clinic in Jacksonville. He is a board certified Family Physician.

HAMPTON GAINS PHYSICIAN

Dr. Jose H. Rodriguez has begun practice in Hampton.

DR. CROW JOINS HOLT-KROCK

Dr. Neil Crow, Jr., has joined Holt-Krock Clinic in Fort Smith. Dr. Crow specializes in Radiology.

DR. CAMPBELL IN AFRICA

Dr. Gilbert Campbell of Little Rock recently visited South Africa to speak to the Surgical Research Society and the Association of Surgeons of South Africa.

BATESVILLE GAINS PHYSICIANS

Drs. Dennis Luter and David Allen, Orthopaedic Surgeons, have opened their office at 501 Virginia Drive in Batesville.

DR. MANN MOVES

Dr. Jerry Mann, formerly of Arkadelphia, has moved to Little Rock. His office is located at 6924 Geyer Springs Road.

DR. HENRY SPEAKS

Dr. Morriss Henry, president of the Arkansas Medical Society, is scheduled to address a general session of the Arkansas Hospital Association convention in Hot Springs October 17-20, 1982.

AAFP OFFICERS

Dr. Lee Parker of Fayetteville is the new president of the Arkansas Academy of Family Physicians. Immediate past president is Dr. R. Jerry Mann of Little Rock. Other officers elected are: Dr. Charles Rodgers of Little Rock as president-elect, Dr. Robert Etherington of Eureka Springs as vice president and Dr. Les Anderson of Lonoke as secretary-treasurer.

DR. JOUETT SPEAKS

Dr. Ray Jouett of Little Rock addressed summer graduates of Harding University during recent ceremonies.

THINGS TO COME

October 16

Fall meeting, Arkansas Orthopaedic Society. Hilton Inn, Fayetteville. For further information, contact Dr. James Moore, Post Office Drawer 1608, Fayetteville 72701; phone (501) 521-2752.

December 6-10

Clinical Decision Making in Alcoholism and Drug Abuse — Smithers Physicians Education Program. For information, contact Andrew J. Gordon, Ph.D., Smithers Alcoholism Treatment and Training Center, St. Luke's-Roosevelt Hospital Center, 428 West 59th Street, New York, New York 10019, or call (212) 554-6725.

1983

February 28-March 4

The Annual Meeting of the United States-Canadian Division of the International Academy of Pathology. Atlanta Hilton, Georgia. For further information, contact Dr. Nathan Kaufman, Secretary-Treasurer, United States - Canadian Division of the International Academy of Pathology, 1003 Chafee Avenue, Augusta, Georgia 30904; telephone (404) 724-2973.

March 5-12

Canadian - American - Medical - Dental - Association. Twenty-second annual meeting at The Lodge, Vail, Colorado. For further information on the professional program, social functions or spouses participation program, contact Dr. H. Robert Allott, CAMDA secretary, at Box 116, Sault Ste. Marie, Michigan 49783.

March 17-19

The Fifteenth Symposium on Philosophy and Medicine, Moral Choice and Medical Crisis. Humanities Section, East Carolina University School of Medicine and the North Carolina Humanities Committee. For further information, contact John Moskop or Loretta Kopelman, Humanities Section, East Carolina University School of Medicine, Greenville, North Carolina 27834; phone (919) 757-2618.

March 25-26

Arkansas Chapter, American College of Surgeons. Spring meeting. Arlington Hotel, Hot Springs. For further information, contact Dr. Gilbert Campbell, University of Arkansas College of Medicine, Department of Surgery, 4301 West Markham, Little Rock 72201, or phone 661-6177.



NEW MEMBERS

DR. NIPONTH VICHUGSANANON

Dr. Vichugsananon, a native of Yala, Thailand, is now practicing in Lake Village. He is a new member of the Chicot County Medical Society.

Dr. Vichugsananon is a 1966 graduate of the Thailand Faculty of Medicine at Siraraj Hospital University of Medical Sciences. His internship was with the Western Pennsylvania Hospital in Pittsburgh and his residency training was with United Hospital in Newark, New Jersey. He is board certified in Pediatrics.

Dr. Vichugsananon's office for General Practice is the Niponth Clinic in Lake Village. His mailing address is Post Office Box 385.

DR. KENNETH MURPHY

Dr. Murphy, a new member of the Hot Spring County Medical Society, was born in Bastrop, Louisiana.

Dr. Murphy received his pre-medical education at the University of Arkansas in Fayetteville and is a 1976 graduate of the University of Arkansas College of Medicine. His flexible internship and General Surgery residency were with the University Hospital in Little Rock.

Dr. Murphy specializes in General Surgery. His office is located at 1002 Schneider Drive, Suite 102, in Malvern.

* * * *

The Pulaski County Medical Society has added seven new members:

DR. KEITH E. ASHCRAFT

Dr. Ashcraft, a native of Pine Bluff, is a 1970 graduate of Arkansas State University at Jonesboro. He was graduated from the University of Arkansas College of Medicine in 1974.

Dr. Ashcraft served his internship at St. Vincent Infirmary in Little Rock. From 1975 to 1977, he trained in Anesthesiology at the University Hospital and trained in Pediatric Anesthesiology at the Arkansas Children's Hospital from 1977 to 1978.

Dr. Ashcraft specializes in Anesthesiology. His office is located in the Doctors Park Building, Suite 720, Little Rock.

DR. RICHARD A. CALHOUN

Dr. Calhoun was born in Little Rock. He received his B.A. degree from the University of Arkansas at Fayetteville in 1975 and is a 1979 graduate of the University of Arkansas College of Medicine.

Dr. Calhoun received his Family Practice training at the Erlanger Medical Center in Chattanooga, Tennessee.

Dr. Calhoun has his office for Family Practice in 330 Doctors Park Building, Little Rock.

DR. ROBERT E. FARRELL

Dr. Farrell, a native of Little Rock, is now practicing Psychiatry at the Westwind Clinic, 50 Westwind Drive, in North Little Rock.

Dr. Farrell received his B.A. degree from Hendrix College in Conway in 1969. He was graduated from the University of Arkansas College of Medicine in 1974. Dr. Farrell served his internship with the University of Arkansas Medical Center and Veterans Administration Hospital in Little Rock. His Psychiatry residency was with the University Hospital.

DR. RICHARD A. NIX

Dr. Nix is an Orthopaedic Surgeon with offices at 9500 Lile Drive in Little Rock.

Dr. Nix was born in El Dorado. His pre-med education was at Vanderbilt University in Nashville, Tennessee. He is a 1977 graduate of the University of Arkansas College of Medicine.

Dr. Nix served a flexible internship and an Orthopaedic residency at the University of Arkansas Medical Center.

DR. SUSAN M. STOCKLEY

Dr. Stockley was born in Pittsburgh, Pennsylvania. After receiving her B.A. degree from Washington University in St. Louis, Missouri, in 1969, Dr. Stockley attended the University of Arkansas at Little Rock and received an M.S.W. degree in 1974. In 1979, she was graduated from the University of Arkansas College of Medicine. Her Internal Medicine residency was with the University from 1979 to 1982.

Dr. Stockley specializes in Internal Medicine. Her office is at 1100 North University in Little Rock.

DR. JAN R. SULLIVAN

Dr. Sullivan, a native of Hot Springs, received her B.S. degree in 1971 from Henderson State College at Arkadelphia. She attended the University of Arkansas Graduate School in Little Rock from 1971 to 1973 and received an M.A. degree. Dr. Sullivan was graduated from the University of Arkansas College of Medicine in 1977.

After a rotating internship at the Baylor College of Medicine in Houston, Dr. Sullivan returned to Little Rock to serve her Neurology residency at the Medical Center.

Dr. Sullivan practices Neurology at 300 Medical Towers Building in Little Rock.

DR. RUEL N. WRIGHT

Dr. Wright was born in Beaumont, Texas. He received a B.A. degree from the University of Chicago in 1970 and an M.D. degree from the University of Michigan Medical School, Ann Arbor, in 1974.

Dr. Wright was in a General Surgery residency from 1974 to 1980 and a Cardiothoracic Surgery residency from 1980 to 1982 at the University of Illinois Hospital in Chicago. He is a board certified Surgeon.

Dr. Wright specializes in Cardiothoracic Surgery. His office is located in the Parkview Medical Building, Suite 330, at #1 St. Vincent Circle in Little Rock.

* * * *

DR. FEDERICO C. deMIRANDA

The Sebastian County Medical Society has added Dr. deMiranda to its membership roll. Dr. deMiranda was born in Camaguey, Cuba.

Dr. deMiranda attended West Virginia University and Hendrix College in Conway. He received his B.A. degree in Biology from Hendrix College in 1974 and in 1978 received his medical degree from the University of Arkansas College of Medicine. His Pediatric internship and residency were with the Medical College and Arkansas Children's Hospital.

Dr. deMiranda has practiced in Fort Smith for one year and assists with the AHEC program. His office for the practice of Pediatrics is at 1501 South Waldron Road in Fort Smith.

DR. TIM YOUNG

Dr. Young, a new member of the Tri-County Medical Society, is a Family Practitioner at the Family Medical Clinic on South Allegheny Street in Hardy.

Dr. Young was born in Pasadena, California. His pre-medical education was with the University of Central Arkansas. He was graduated from the University of Arkansas College of Medicine in 1979. From 1979 to 1982, Dr. Young was in Family Practice residency with the Area Health Education Center in Fort Smith.

DR. DANNY L. PROFFITT

Dr. Danny L. Proffitt has become an active member of the Washington County Medical Society. He was previously a resident member. Dr.

Proffitt was born in Dyess. He is a 1974 graduate of Arkansas State University and a 1978 graduate of the University of Arkansas College of Medicine. He completed a Family Practice residency with the Area Health Education Center at Fayetteville. He is board certified in Family Practice.

Dr. Proffitt has served during the last year as Assistant Family Practice Coordinator at the Area Health Education Center in Fayetteville. He is an Assistant Professor of Medicine with the University of Arkansas for Medical Sciences. His address is AHEC, Northwest, at 241 West Spring in Fayetteville.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The patient has a sinus bradycardia af 54 beats per minute, with the P-waves being best seen in V_1. A first degree AV black is present and the QRS duratian is increased ta 0.14 secands. There is a pasitive wave terminating the QRS camplex seen best in I, II, AVF, and V_2 thraugh V_6. This wave is called a J deflectian ar Osbarn wave and stands as the electracardiagraphic feature mast distinctive af hypathermia. The arigin af this wave is nat knawn. Other ECG features af hypathermia include slawing af the sinus rate, pralangatian af the PR, QT, and QRS intervals, and atrial and ventricular arrhythmias. This patient was warmed with narmalizatian af her ECG.



AMA AUXILIARY CONVENTION

The Arkansas delegates to the 1982 AMA Auxiliary convention in Chicago were Joann Cornell (Paul), Sarah Meredith (Paul), Donna Crenshaw (John) and Ramona Taylor (Herbert). Alternate delegates were Margaret Kolb (Payton) and Wanda Townsend (Thomas). Arkansas Historian/Archivist Helen Padberg (Frank) attended sessions as a special guest.

Prior to the opening of the House of Delegates, each representative attended two workshops on either AMA-ERF, Health Projects, Legislation, or Membership. The keynote address for the opening session was given by The Honorable Lynn M. Martin, Republican member of Congress from the 16th District of Illinois.

Reference hearings were held on finance, health issues and bylaws on the second day of convention. A spectacular multi-media presentation entitled "The Auxiliary, A History of Leadership" was featured at the 60th Anniversary Brunch. A photograph of each auxiliary president was shown with music and visual reminders from her year in office. Arkansas can be proud of our two National Presidents — Mona Lawson and Esther Long.

The House of Delegates voted to accept the recommendation from the Finance Reference Committee and approved the budget as presented and voted to increase services to widows and spouses of retired physicians.

The delegates also accepted the recommendations of the Reference Committee on Health and passed a resolution for support for the spouses and families of impaired physicians; for the encouragement of coalition with Health organiza-



Mrs. Paul Cornell, president-elect, and Mrs. Frank Padberg, historian (left), at the AMAA Convention in Chicago.



Mrs. John Crenshaw and Mrs. Paul Meredith served as delegates during the AMAA convention.



Mrs. Paul Meredith and Mrs. John Crenshaw relax during a break of the proceedings at the convention.

tions; for support for programs to help prevent child abuse; for parental involvement and intervention in marijuana use among youth; for enforcement of drunk driving laws; for continuation of Shape Up For Life; for State Organ Donation Awareness Weeks; and for support of Home Health Care Services in the community.

Tuesday's luncheon speaker was Rhea Seddon, M.D., Mission Specialist for NASA. The film of the last Columbia flight and a talk on the duties of astronauts by this petite, pregnant blond was quite a success.

The symposium for the convention was presented by Carol Nadelson, M.D., professor of Psychiatry at Tufts University. Dr. Nadelson spoke on her studies of "Family Relationships and the Medical Marriage."

A special convention treat was attending "The King and I" on Yul Brenners' 50 year anniversary in show business.

The final convention session held a special honor for Arkansas as Jackson County received a 100% membership award.

Convention is a busy, hectic occasion but allows delegates to share ideas and develop friendships.

ARKANSAS' REPORT TO THE AMA AUXILIARY CONVENTION 1982

This year Arkansas was again led by an outstanding president. Mrs. Raymond Peeples (Bonnie) guided us through three informative national meetings and a great year for our State.

Our twenty component auxiliaries had a busy year. $10,600 was donated to AMA-ERF. Several innovative approaches were used to raise these funds: a luau, a hoe-down, and an art auction.

Med-Camps of Arkansas is always special to us. This camp provides a recreational camping experience for children with spina bifida, diabetes, cerebral palsy and other medical conditions. Our counties continued their support with contributions for scholarships.

In the "*Southern*" tradition we observed Doctor's Day. Most in the way of a dinner, but one county tried a M*A*S*H party complete with bouquets in urinals and wine flowing from an IV rack. Another auxiliary delivered a singing telegram to each physician!

In the area of health, Shape Up for Life was a continuing locus. Our emphasis on Organ Donation Week was aided by a proclamation from Governor Frank White. Child safety restraints, CPR, scoliosis screening, a breast self-exam clinic, a veneral disease project, and a play hospital are examples of health interests across the State.

Although nursing loans are available at the State level, several counties are also providing this assistance to relieve the nursing shortage. One county staged a doctor/lawyer basketball game, netting $2,600 to start their loan fund.

Arkansas is proud to have our first male auxilian, another Outstanding Citizen of the Year, and our own Auxiliary singers — "Florence and The Nightingales."

I'm sorry Bonnie is unable to be here today to give her report but Arkansas wishes her well as a mission hostess in the Southern Baptist compound in Eccu, Nigeria.

Ramona B. Taylor (Herbert)
President, 1982-1983

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October, 1982

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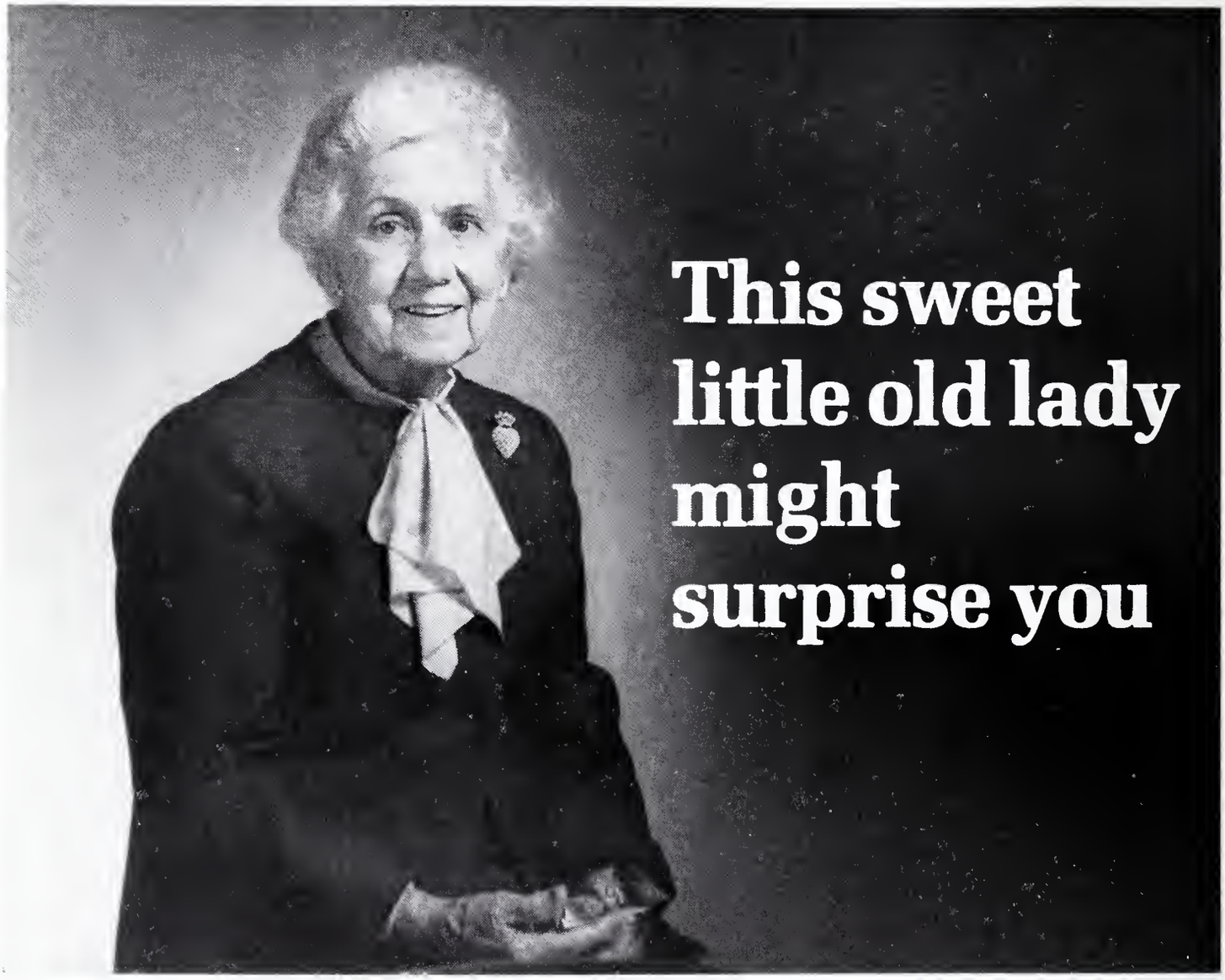
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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to this membership.

SCIENTIFIC ARTICLES

Viral Gastroenteritis in Infants 163
Steven Thompson, M.D., and William J. Byrne, M.D.

Prostaglandin E_1 In Neonates With Critical Congenital Heart Disease 167
W. T. Dungan, M.D., J. B. Norton, Jr., M.D., R. I. Readinger, M.D., and R. F. Sotomora, M.D.

FEATURES

ECG of the Month 171
John W. Watson, M.D.

Office Orthopaedics: "Fetal Constriction Rings" 172
Kenneth G. Jones, M.D.

Letter to the Editor 173

Things to Come 174

Editorial: "Nonspecific Inflammatory Bowel Disease" 175
Alfred Kahn, Jr., M.D.

From Other Years: "Incised Wound of Abdomen and Intestine" 177

Medicine in the News 178

Proceedings of the Council 182

Keeping Up 184

Personal and News Items 186

Obituaries 188

New Members 189

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Viral Gastroenteritis in Infants

Steven Thompson, M.D., and William J. Byrne, M.D.*

In terms of disease frequency in infants, acute diarrhea is second only to the common cold. Last year in the United States, diarrheal illness accounted for 15% of the hospital admissions for children less than 2 years of age. The vast majority were non-bacterial and therefore presumed to be of viral etiology.

VIRAL AGENTS

During the past decade five morphologically distinct viruses have been associated with acute gastroenteritis in infants. These agents include the rotavirus, mini-reovirus, viruses in the picorna/parvo virus group, adenovirus and astrovirus. Rotavirus, also referred to as the orbi, reolike, duo or infant gastroenteritis virus, has a diameter of approximately 70 nm. In infants and young children it is the most common etiologic agent, contributing to more than 50% of all cases of gastroenteritis during colder months of the year.[1-3] The Norwalks agent, so named for the gastroenteritis outbreak in Norwalk, Ohio, has also been identified as a causative agent. Electron microscopic studies of stool from volunteer subjects infected with the Norwalk agent revealed 27 nm particles with physical characteristics similar to the picorna/parvo virus group. Adenovirus, mini-reovirus and astrovirus have also been identified by electron microscopic studies of stools from infants with acute gastroenteritis and proposed as causative agents.

EPIDEMIOLOGY

In temperate climates rotavirus infections have a definite seasonal incidence with a peak occurrence during the colder winter months.[2,3] Adenovirus, picorna/parvoviruses and astrovirus infections are also more prevalent during the winter months but do not show the striking seasonal incidence seen with the rotavirus. Mini-reovirus on the other hand shows a fairly even seasonal distribution.

The epidemiology of rotavirus infection is not completely understood. Kapikian, et al, found serologic evidence of recent rotavirus infection in 14 of 40 parents whose infants had acute gastroenteritis due to rotavirus. Only three of the 14 had mild symptoms. Similar data from other investigators supports the hypothesis that: 1) primary infection with rotavirus in infancy results in moderate to severe disease, 2) reinfection in adolescence or adulthood results in mild or subclinical disease presumably because of previous experience with the agent, and 3) since infants have limited exposure with others of similar age, older siblings or parents may be the source of infection.

PATHOPHYSIOLOGY

Human rotavirus invades the epithelium of the upper small intestine.[4] In severe cases invasion may occur throughout the length of the small bowel and even include the colon. This invasion results in mucosal cell shedding and an inflammatory response in the lamina propria. The Norwalk agent has likewise been shown to damage the mucosa.[5] The observation that patients with acute viral gastroenteritis had excessive losses of not only water but also Na^+, K^+ and Cl^- in their stools, and the studies of McClung, et al, which showed defects in Na^+ transport in the villi of the jejunum in animals infected with transmissible gastroenteritis virus raised the questions of whether other factors besides mucosal damage play a role in the pathogenesis of acute viral gastroenteritis.[6] Pensaert demonstrated in piglets that within 10 hours following inoculation transmissible gastroenteritis virus invades and replicates within the epithelial cell.[7] Within 16 hours the majority of the cells have desquamated and been replaced by cells migrating from the crypts, perhaps at an accellerated rate. By 40 hours, when Na^+ transport is most deranged, the villi are covered with uninfected but relatively immature crypt-like cells. These immature enterocytes have Na^+ transport characteristics similar to

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crypt cells. It is apparent now, at least in animal models, that the diarrheal illness is at its worst when the villous enterocytes are immature, and when abnormalities of Na^+ transport are most prominent, not when the virus is present in the epithelium.

CLINICAL CHARACTERISTICS

Rotavirus produces a more severe illness than does other causes of acute gastroenteritis in infancy. Table I lists the clinical characteristics. In 20 percent of patients, fever and vomiting precede the onset of diarrhea by 24 hours. However in 30 percent diarrhea precedes the onset of vomiting. Nevertheless vomiting is a characteristic symptom. In their survey of 250 infants with acute gastroenteritis, Rodriquez, et al, found that in 72 with documented rotavirus infection, 96 percent vomited.[8] Compared to a 53 percent figure for the non rotavirus group, this difference was statistically significant. The vomiting may continue for three to four days whereas the diarrhea may persist for up to one week. In Rodriquez's study the combination of vomiting and diarrhea resulted in mild to moderate dehydration in 83 percent of those with rotavirus. When compared to a 40 percent figure for dehydration in non rotavirus infections, the difference was statistically significant.[8]

DIAGNOSTIC TESTS

While several laboratory techniques may be used to identify rotavirus (Table II), only the ELISA test is practical for clinical use.[9] It is simple to perform and is as sensitive as electric microscopy or radioimmune assay for the detection of this agent.

MANAGEMENT

The hallmark of managing infants with acute viral gastroenteritis is to replace excessive fluid and electrolyte losses. This is best accomplished using a clear liquid containing glucose or sucrose and electrolytes (Table III). Either Pedialyte® or Lytren® are preferred choices because of their electrolyte content and the presence of the simple sugar glucose. Other agents such as 7-Up, Coke, Pepsi or tea are deficient in electrolytes and contain sucrose which requires digestion by sucrase. The clear liquids should be continued for 48 to 72 hours, depending on the course of the diarrhea. The infant can then be advanced to 1/2 strength formula for 24 hours and if tolerated, further advanced to full strength formula. The use of bananas or rice cereal to "firm up" the stools has no scientific foundation and is based on antedotal experience.

Drugs such as Lomotil® or Paragoric® are contraindicated in the management of infants with acute or for that matter chronic diarrhea. Both of these agents decrease bowel motility and therefore the frequency of the stools. However, this decrease in the frequency of stools may mask serious fluid and electrolyte losses from stools of larger volume, thereby creating the false sense of security that the infant is "getting better." Animal studies also support the concept that decreasing motility impairs the intestines' ability to

TABLE I.
Clinical Characteristics of Rotavirus Infection in Infants

1. Diarrhea
2. Vomiting
3. Fever
4. Irritability
5. Lethargy
6. Pharyngeal erythema
7. Rhinitis
8. Red tympanic membranes
9. Cervical lymphadenopathy

TABLE II.
Methods Available For the Detection of Rotavirus Infection*

1. Enzyme-linked immunosorbent assay (ELISA)
2. Electronmicroscopy
3. Solid phase radioimmunoassay
4. Counterimmunoetechopharesis
5. Viral immunofluorescence
6. Complement-fixation methods

*All of the assays are performed on stool specimens.

TABLE III.
Composition of Commonly Used Clear Liquids

Solution	Na(meq/L)	K(Meq/L)	Calories/ounce	Source of Calories
Pedialyte	30	20	5.7	Glucose
Lytren	30	25	9.4	Glucose, corn syrup solids
Gatorade	17.4	2.5	5.7	Glucose, dextromaltins, vegetable oil
7-Up	3.9	0	11.4	Sucrose
Coca-Cola	0.4	12.8	13.7	Sucrose
Pepsi-Cola	6.5	0.5	14.8	Sucrose

eliminate infectious organisms. Lomotil® has further hazards. This drug contains 2.5 mg of diphenoxylate hydrochloride and 0.025 mg of atropine sulfate per 5 cc or per tablet. Repetitive usage in infants may result in atropine poisoning. Furthermore, diphenoxylate hydrochloride has an enterohepatic circulation and accumulating blood levels may result in CNS and respiratory depression. Antibiotics likewise are of no benefit in the management of acute viral gastroenteritis. Lactinex® tablets or granules have not been proven to be of any value and therefore should not be prescribed.

When to hospitalize a child is sometimes a difficult clinical decision and social factors are often important. Obviously the dehydrated infant needs admission for intravenous fluids. Also, all infants less than 3 months of age in whom the vomiting and diarrhea are severe and concurrent should be admitted. Young infants dehydrate rapidly and the parents may become falsely secure after having seen the doctor. Finally, if there is a question of follow-up or compliance, admission should be considered.

Following hospitalization a decision must be made regarding therapy—intravenous fluids versus oral clear liquids. Obviously dehydration requires intravenous fluid replacement and the infant should be given nothing by mouth (NPO). Stool output must be monitored, ideally by measuring stool volume quantitatively. This may be accomplished by weighing the diaper before and after soiling. Contamination from urine is prevented by the application of a urine bag. On intravenous fluids with no oral intake, stools should stop. If not, intestinal damage is severe enough to prevent the reabsorption of endogenous gastrointestinal secretions. This is the so-called secretory diarrhea. These infants should remain NPO and receive parenteral nutrition until the stools do stop. The course depends on the severity of intestinal damage and may take up to six weeks in very severe cases. If the diarrhea stops on intravenous fluids, clear liquids may be started and the stool volume continuously monitored. Should the stool volume on clear liquids be greater than 20 gm/kg/d the infant must again be placed NPO and parenteral nutrition started and continued for 48 hours. After this period of time, assuming there has been no further stool output, feeding with clear liquids can once again be attempted. If the stool volume on clear liquids is 20 gm/kg/day or less, up to a maximum of 200 gm/day in an infant greater than 10 kg, then 1/4 strength formula may be started. Formula strength can be gradually advanced every 24 hours to 1/2, 3/4 and finally full strength, assuming the stool volume does not again become excessive. In the event the stool volume does become excessive, the infant should once again be placed on clear liquids and the following diagnostic possibility considered.

COMPLICATIONS

The most likely sequalae in infants whose hospital course has been short and who tolerated dilute formulas is disaccharide intolerance. Lactase is present quantitatively in the least amount in the gastrointestinal tract and with even mild to moderate damage may be present in insufficient quantities to permit hydrolysis of the lactose present in cow's milk formulas. Thus the lactose remains undigested and acts as an osmotic agent in the intestine, resulting in an increase in stool volume. The diagnosis may be made empirically based on stool volume and confirmed by testing the stools for reducing substance and checking the pH, or by instituting a formal lactose challenge. Switching to a formula containing sucrose will usually resolve the problem. Gradual advancement in strength should be carried out as previously outlined. After four to six weeks a lactose containing formula may be reintroduced. Sucrose may likewise not be tolerated in infants who have had a moderate to severe course. Sucrase deficiency may be confirmed by testing stools for reducing substance and pH, or with a formal sucrose tolerance test. In these infants it will be necessary to use an "elemental" formula such as Pregestimil. This formula should be continued for five to six weeks before switching to one which contains either sucrose or lactose.

Stools may be tested for the malabsorption of carbohydrate in the following fashion. First the liquid portion of the stool should be used and the test done within 30 minutes of excretion. One milliliter of stool is placed in a test tube and an equal volume of water added. The pH is then determined with nitrazine paper. If it is 5.5 or less there is evidence of carbohydrate malabsorption. This acid mileu is produced from the release of organic acids, particularly buteric acid by bacteria in the colon which metabolize the malabsorbed sugars. A Clinitest® tablet is then added to the test tube and the reaction read col-

orometrically. The presence of 1% or greater reducing substance is abnormal and indicative of lactose malabsorption. When testing for sucrose, the sugar must be hydrolyzed before adding the Clinitest® tablet. This may be accomplished by including 1 ml of 0.1 N HCl into the mixture and heating for 30 seconds.

Before performing a lactose or sucrose tolerance test the patient must be fasted for six hours. A blood glucose is drawn and then a solution containing either lactose or sucrose at a dose of 2 gm/kg up to a maximum of 50 gm is given orally as a 20 percent solution. Serum for glucose determination is then obtained at 15, 30, 45, 60 and 90 minutes. All stools are tested for pH and reducing substance for the subsequent 24 hour period. The lactose tolerance test is positive for carbohydrate malabsorption if there is less than a 20 mg rise in the blood glucose and/or there is evidence of carbohydrate in the stools. The sucrose tolerance test is positive if the rise in blood glucose is less than 40 mg percent and/or the stools show carbohydrate malabsorption.

COURSE

In the vast majority of cases intestinal mucosal damage is mild and the illness is brief and without sequalae. Even with rotavirus infection, when the illness is more severe and requires hospitalization, 95% of infants will tolerate oral fluids by the second hospital day and will be discharged by the eighth day.[10]

SUMMARY

The majority of acute diarrheal disease in infants during the colder months of the year is caused by viruses. Recent studies have identified the rotavirus as the most important pathogen. Because of its particular virulence careful follow-up is important. Care should be supportive, including hospitalization if necessary. Regardless, antimotility drugs and antibiotics have no role in management. The vast majority of infants recover without complications.

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Prostaglandin E_1 In Neonates With Critical Congenital Heart Disease

W. T. Dungan, M.D., J. B. Norton, Jr., M.D.,
R. I. Readinger, M.D., and R. F. Sotomora, M.D.*

Persistent patency of the ductus arteriosus (PDA) is necessary for survival in certain types of congenital heart disease. Neonates with pulmonary atresia or critical pulmonary stenosis are almost entirely dependent upon the ductus for the maintenance of pulmonary blood flow. Interruption of the aortic arch or critical coarctation of the aorta may require a PDA for adequate blood flow to the lower half of the body. A PDA may also benefit patients with tricuspid valve anomalies who have right to left atrial shunting and restricted pulmonary blood flow. In patients with transposition of the great arteries and persistently severe hypoxemia *after* a balloon atrial septostomy, opening of the ductus may increase pulmonary blood flow further and thus enhance intracardiac mixing.

Muscle tone of the fetal ductus arteriosus appears to be controlled in part by the endogenous production of Prostaglandin compounds.[1-4] Prostaglandin E_1 (PGE_1) has been shown to dilate the ductus arteriosus in humans.[5-9] This pharmacologic agent has been used in clinical trials in selected centers around the country for the last five years, and it has been recently approved for general use by the Food and Drug Administration.

The purpose of this report is to present data from the University of Arkansas for Medical Sciences and the Arkansas Children's Hospital regarding the use of PGE_1 in 28 infants with congenital heart disease, to present several representative cases, and to make suggestions for the use of PGE_1 in hospital nurseries in Arkansas.

PATIENTS AND METHODS

Clinical data are shown in the Table. This group of patients was referred for cardiac evaluation during the years 1978 through 1981. Every case in which one or more of the authors felt that ductal dilatation would be beneficial is included; thus all patients who received PGE_1 during that time are represented in the table. Intravenous or intra-arterial infusions of PGE_1 were begun after a clinical and echocardiographic diagnosis had been made and/or during cardiac catheterization. Informed consent was obtained from the family in each instance. PGE_1 was given in a 5% dextrose solution and infused at a rate of 0.1 micrograms/kilogram/minute. After ductal patency was obtained as determined by clinical improvement the dose of PGE_1 was reduced to the lowest effective level (occasionally as low as 0.02 micrograms/kilogram/minute). Vital signs and arterial oxygen and carbon dioxide tension as well as pH were monitored before and during infusion of PGE_1.

RESULTS

The clinical outcome of our 28 patients is demonstrated in the Table. Sixteen (57%) of the twenty-eight survived. Fourteen of nineteen patients with diminished pulmonary blood flow had an increase in arterial oxygen saturation during infusion of PGE_1. All seven patients with aortic arch obstruction manifested significant clinical improvement with increased distal aortic blood flow and a rise in arterial pH. The two patients with transposition of the great arteries were also improved; presumably as pulmonary flow increased so that inter-atrial mixing could improve. There appeared to be no effect on the ductus arteriosus in four patients. In two patients (cases 3 and 16) the ductus was already widely patent when the drug was used and it was unclear that additional dilatation occurred. In case 24, in spite of the infant's age of 73 days, the clinical course suggested that the PDA had constricted one or two days prior to presentation and the drug produced dramatic improvement.

It should also be pointed out that in case No. 9, no ductus arteriosus was present, for in that unusual case of pulmonary atresia, the pulmonary flow existed exclusively by way of two unusual branches of the subclavian arteries.

The following cases are representative.

CASE REPORTS

Case 1

This Caucasian female infant was the product of a full-term pregnancy and uncomplicated de-

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livery at Doctors Hospital in Little Rock. Her birth weight was 3.0 kilograms. Shortly after birth the infant was noted to be cyanotic with marked arterial hypoxemia. No cardiac murmur was audible. An electrocardiogram was normal. Chest radiographs demonstrated a small heart with diminished pulmonary vascular markings. The infant was transferred to Arkansas Children's Hospital where echocardiographic evidence of a ventricular septal defect and a large over-riding aorta was demonstrated. The pulmonary valve was not identified. A clinical diagnosis of pulmonary valve atresia with a ventricular septal defect was made. A peripheral venous infusion of PGE_1 was begun, and the $Pa0_2$ increased promptly from 30 torr to 50 torr. Cardiac catheterization was then performed, and the data and angiograms confirmed the diagnosis of pulmonary atresia with a ventricular septal defect. A PDA supplied the pulmonary circulation. The PGE_1 infusion was continued, and surgical palliation was accomplished with a modified left Blalock procedure using a Gore-Tex™ graft between the left subclavian artery and the left pulmonary artery. Seven months following surgery, the patient is doing quite well with only minimal cyanosis and with normal growth and development.

Case 2

This Caucasian male infant was delivered at Baptist Medical Center in Little Rock following a full-term uncomplicated pregnancy. His birth weight was 3.4 kilograms. At 24 hours of age the infant developed symptoms and signs of congestive heart failure with poor peripheral perfusion. The heart was greatly enlarged and there was pulmonary edema present. An aortogram (via an umbilical artery catheter) was performed in the nursery and provided evidence of a complete interruption of the aortic arch. The patient was transferred to Arkansas Children's Hospital in critical condition. The arterial pH was 6.8. The PCO_2 was 24 torr and the PO_2 was 94 torr. The patient was started on an intravenous infusion of PGE_1. The digoxin and furosemide begun earlier were continued. The arterial pH rose to normal shortly after the PGE_1 infusion was begun. On the third day of life cardiac catheterization confirmed the diagnosis of an interruption of the aortic arch with ventricular and atrial septal defects. The ductus arteriosus which supplied circulation to the descending aorta was widely patent in contrast to the constricted ductus arteriosus noted on the initial aortogram. On the fifth day of life, a Gore-Tex™ graft was inserted between the ascending and descending aorta, the PDA was ligated, and the pulmonary artery was banded. Though the patient's immediate postoperative course was complicated, he has subsequently done relatively well and is awaiting intracardiac repair of the ventricular septal defect and removal of the pulmonary arterial band.

Case 3

This Caucasian male infant was the product of a full-term pregnancy and uncomplicated delivery. His birth weight was 2.9 kilograms. At 12 hours of age the infant was noted to be cyanotic, and he was transferred from Russellville to Arkansas Children's Hospital at 24 hours of age because of increasing cyanosis. Though quite cyanotic, the infant had developed no respiratory distress. No murmur was audible. The heart was normal in size and the pulmonary vascular markings were decreased. An electrocardiogram demonstrated left axis deviation. An echocardiogram was suggestive of tricuspid atresia with hypoplasia of the right ventricle. The initial arterial PO_2 was 26 torr. The patient was started on a PGE_1 infusion, and the PaO_2 promptly increased to 53 torr. Cardiac catheterization data and angiograms confirmed the diagnosis of tricuspid atresia, ventricular septal defect, and pulmonary valve stenosis. The pulmonary circulation was supplied predominantly by a patent ductus arteriosus. At 36 hours of age the patient underwent a modified left Blalock procedure with a 5 mm Gore-Tex™ graft placed between the left subclavian artery and the left pulmonary artery. The patient did well following surgery, and he was discharged at 8 days of age requiring no medications.

DISCUSSION

Major advances in cardiovascular surgery and the introduction of Prostaglandin E_1 as a therapeutic tool have revolutionized the care of the neonate with a ductal dependent congenital cardiac anomaly. PGE_1 may frequently dilate a recently constricted ductus to thus relieve severe hypoxemia or aortic obstruction resulting in improvement in acid base balance, more effective cardiopulmonary function, and a greatly enhanced potential for survival. The period of stabilization that can be accomplished with this drug has greatly improved the chances of surviv-

ing the stress of cardiac catheterization and surgery. The majority of infants with congenital cardiac anomalies are otherwise normal, and early diagnosis is of the utmost importance since surgical management may be life-saving. Conservative observation of a cyanotic infant is no longer an alternative to aggressive diagnosis and management.

PGE_1 carries the generic name of alprostadil, and it is supplied as Prostin VR Pediatric by the Upjohn Laboratory. The most common side effects include peripheral vascular flushing, increased heart rate, and hyperpyrexia. Serious complications are seizures, hypotension, and apnea which may be experienced by approximately 10% of patients, particularly those whose birth weight is below 2 kilograms. We have also noted hypoglycemia and hyperglycemia. Accordingly, PGE_1 should be administered in facilities that provide pediatric intensive care and ventilatory assistance must be available during transport if PGE_1 is being infused.

We suggest that PGE_1 be considered only after consultation with a pediatric cardiologist, and

SUMMARY OF CLINICAL DATA

Patient	Age (Days)	Diagnosis	PGE_1 Effect On Ductus Arteriosus Pos	Neg	Side Effects of PGE_1	Clinical Outcome
1	1	PA, Hypoplastic RV	X		Flushing, Hyperpyrexia	Improved after surgery
2	1	Hypoplastic Lungs		X		Died
3	60	Tricuspid Atresia	Probable			Died after surgery
4	2	Pulmonic Stenosis, Hypoplastic RV		X		Died after surgery
5	1	Ebstein's Anomaly	X			Alive and Improved without surgery
6	1	Tetralogy of Fallot	X			Died after surgery
7		PA, Dextrocardia	X		Apnea	Improved after surgery
8	12	Coarctation of Aorta	X			Died after surgery
9	1	PA, VSD		X		Alive, improved without surgery
10	1	PA	X			Improved after surgery Died of Necrotizing enterocolitis
11	3	Interruption of Aorta, VSD	X			Improved after surgery
12	1	PA, Single Ventricle, TGV	X		Atrial Tachycardia	Died (Multiple Anomalies)
13	1	PA, Dextrocardia, TGV, VSD, Hypoplastic LV	X			Died at surgery
14	2	Coarctation of Aorta	X			Died at surgery
15	1	PA, Hypoplastic RV	X			Died after surgery
16	8	AS, Hypoplastic LV	Probable			Died after surgery
17	1	Tetralogy of Fallot		X		Improved after surgery
18	1	Severe PS	X			Improved after surgery
19	1	Tetralogy of Fallot	X			Improved after surgery
20	1	PA, Hypoplastic RV	X		Hyperglycemia	Died after surgery
21	1	PA, Tricuspid Atresia	X		Apnea, Hypo-and Hyperglycemia	Improved after surgery
22	4	TGV, post-septostomy	X			Improved
23	1	TGV, post-septostomy	X			Died after surgery
24	73	PA, Dextrocardia, VSD	X		Apnea, Flushing	Improved after surgery
25	1	Interruption of Aorta, VSD	X			Improved after surgery
26	1	Coarctation of Aorta, VSD	X			Improved after surgery
27	2	Tricuspid Atresia, VSD, PS	X		Flushing	Improved after surgery
28	7	Coarctation of Aorta, VSD	X			Improved after surgery

ABBREVIATIONS: PA (Pulmonary Atresia) PS (Pulmonary Stenosis) VSD (Ventricular Septal Defect) TGV (Transposition of Great Vessels) RV (Right Ventricle) LV (Left Ventricle)

after arrangements have been made to transport the patient to a cardiac center. If a clinical diagnosis of pulmonary atresia, critical pulmonary stenosis or tricuspid atresia is considered likely, then dilatation of the ductus should produce prompt improvement in arterial oxygenation. In the presence of mild or moderate pulmonic stenosis with a VSD (tetralogy of Fallot), the peripheral vasodilatation produced by the drug may (as in our case 17) result in reduction in pulmonary flow and worsening of the arterial oxygen tension. Thus the drug is not invariably helpful.

In cases of aortic arch obstruction (severe coarctation of the aorta or complete interruption) the ductus frequently supplies the distal aorta, and ductal constriction is the event that often triggers severe congestive heart failure. Reopening the ductus has been lifesaving in several cases, allowing time to make a complete anatomic diagnosis, to stabilize the infant, and to plan definitive surgery.

Complete transposition of the great vessels results in severe cyanosis because of inadequate intracardiac mixing. If the pulmonary flow is increased and no site for mixing is present then left atrial pressure will rise resulting in pulmonary edema. Though most infants improve with atrial septostomy alone, some will not improve unless the pulmonary flow is increased further by ductal dilatation. PGE_1 is not indicated in children with transposition of the great vessels unless an adequate atrial septostomy has been performed.

CONCLUSIONS

Prostaglandin E_1 provides an important new modality for palliation of critical congenital heart disease in infants where ductal constriction can markedly impair their clinical status. Our experience coupled with that of other cardiac centers suggests that this drug will frequently produce prompt ductal dilatation in young infants. Medical palliation thus achieved may provide the margin of safety needed for effective surgical intervention.

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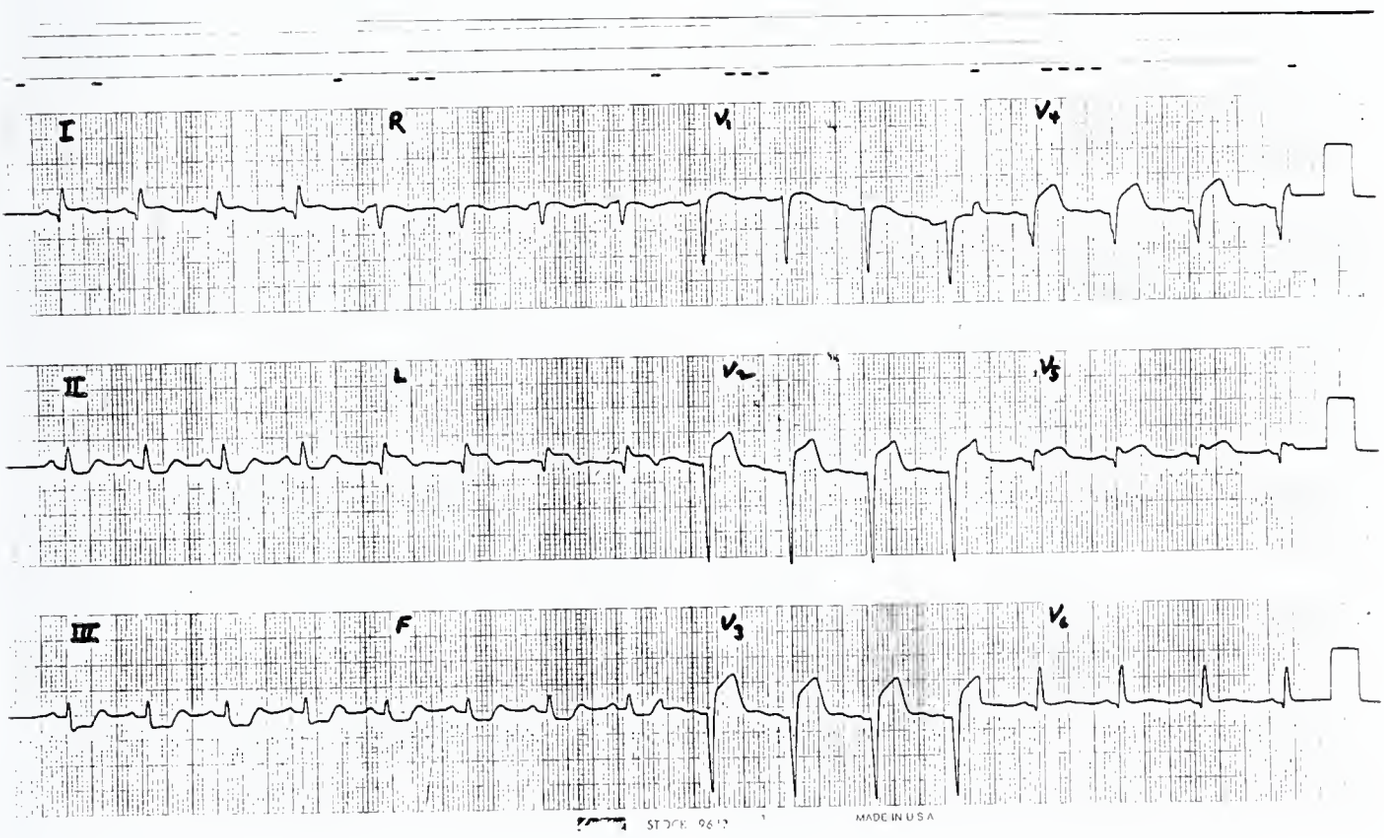
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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 190)

HISTORY: J. C. is a 60-year-old man who presented to the hospital because of chest pain. On physical examination, he was noted to be pale, diaphoretic, and dyspneic. The blood pressure was 90/60 mmHg, rales were present bilaterally, and an S_3 was noted. His ECG is shown below. What would be your approach with respect to treatment?



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Office Orthopaedics

Fetal Constriction Rings

Kenneth G. Jones, M.D.*

There is no consensus as to the etiology of this birth defect. Hippocrates suggested that the cause was extra-fetal when he implicated amniotic bands. Although his thesis has been reasserted by many subsequent investigators, others have argued that the error is intrinsic with the fetus. It has been suggested that the process is a consequence of an abnormal development of skin creases, and the two processes do appear to be similar histologically. Other causes have been advanced, but, since none of the advocates have proven their case, debate continues. There is no evidence that constriction rings are inherited.

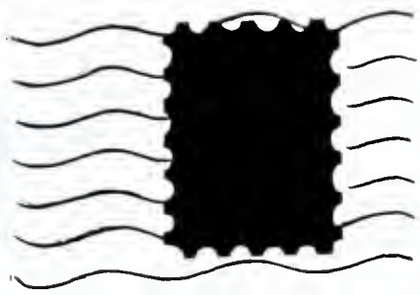
Occurrence is thought to be once in approximately 15,000 births. Both the upper and lower extremities are affected. In the upper extremities one-third of the lesions occur above the wrist. In the hand the central three digits, of the five-digit hand, are more frequently involved than the border digits. The constrictions are found at right angles to the longitudinal axis of the affected extremity. They may completely encircle the part or be limited to one surface. The depth of the constriction can be quite shallow, but autoamputations occur. Syndactyly, acrosyndactyly, and other anomalies of the affected part are encountered frequently. The nails are often abnormal while vascular and neurological deficiencies distal to significant constriction bands should be expected. A non-pitting edema may be present. Distant anomalies should be sought for.

The physician who attends the infant early should be aware that the severity of the constrictions found at birth may not be static. Granulation tissue in the depth of the rings may, in the process of healing, increase the severity of the tourniquet effect leading to development of a vascular embarrassment of those tissues distal to the band as demonstrated by increasing edema and cyanosis. These findings would argue for an early release of the rings.

Very mild and incomplete bands may appear to regress as baby fat is absorbed or reapportioned and seldom require treatment. More severe bands will require surgery. The more marked the constriction, especially when the process is further complicated by syndactyly, etc., the earlier reconstructive procedures need to be instituted. Surgical rehabilitation, which may require multiple staged procedures, can be instituted whenever the infant constitutes a proper risk for the required anesthesia, usually no later than six months of age.

The basic surgical procedure is a sixty-degree Z-plasty. Most often a complete ring is excised in two stages to avoid any potential circulatory compromise of the distal segment. The first Z-plasty may be placed on either the dorsal or the volar surface of the extremity. The second procedure is performed at a later date on the opposite surface, thereby completely releasing the constricting band. It may be anticipated that when a good surgical correction has been obtained, it will be maintained throughout the patient's life. Abnormalities, in addition to the constriction ring, when present, will require a more extensive surgical regimen.

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LETTERS TO THE EDITOR

Dr. Alfred Kahn, Jr., Editor
Journal of the Arkansas Medical Society
1300 West Sixth Street
Little Rock, AR 72201

Dear Dr. Kahn:

This letter is written in an effort to provide information for the physicians of Arkansas regarding some controversial techniques in diagnosis and treatment of allergic diseases. It is written with the encouragement and approval of the vast majority of trained and certified allergists in the state. Our concern is that a number of patients have had considerable expense as a result of diagnostic and therapeutic procedures which have not been proven effective, which are costly, and which can be potentially dangerous.

An article in the *Arkansas Gazette* (April 25, 1982) described a blood test (leukocytotoxic test) in which white blood cells of the patients are incubated with food or chemical extracts, resulting in changes in form and structure of the white blood cells if the patient is sensitive to that material. The implication of the article is that this leukocytotoxic test is preferable to allergy skin testing and trial elimination diets in detecting food allergy. The limitations and shortcomings of allergy skin testing with foods are well known, but they do often provide clues regarding possible food allergies. Some type of trial elimination diet, with subsequent serial addition of the foods back to the diet, is necessary in order to be certain about problems from foods. Some of these problems are truly allergic (immunologically mediated), and some of them are intolerances of one type or another.

The Executive Committee and the Committee on Unproved Techniques of the American Academy of Allergy and Immunology published a position statement in *The Journal of Allergy and Clinical Immunology*[1] in 1981, quoting the results of five controlled studies, all of which showed no correlation between the results of the leukocytotoxic test and food allergy. The position statement concludes:

(1) There is no proof that leukocytotoxic testing is effective for diagnosis of food or inhalant allergy.
(2) A number of controlled trials have indicated that leukocytotoxic testing is ineffective for diagnosis of food and inhalant allergy.
(3) Leukocytotoxic testing should be reserved for experimental use only in well designed trials.

It should be pointed out that the newspaper article quotes a charge of $493.50 for testing with 141 foods, or a charge of $273.00 for testing with 78 foods. Charges of this magnitude for a testing procedure that has not been proven valid, are difficult to defend.

In recent years there have been a number of references to "provocative and neutralization testing" either by subcutaneous injection of allergenic material, or by sublingual drops. Proponents of these provocative and neutralization tests (either subcutaneous or sublingual) state that administration of small amounts of the antigenic material will elicit symptoms corresponding to the complaints of the patient; then a second (neutralizing) dose, which might be either larger or smaller than the initial provocative dose, will result in disappearance of these symptoms. The provocative dose is said to result in the appearance of symptoms within about ten minutes, and the disappearance of the symptoms is said to occur within about four hours, or less. There have been several anecdotal reports regarding this testing procedure but no prospective, double-blind controlled study has substantiated its effectiveness. On the other hand, several controlled studies revealed that provocative testing did not discriminate between placebo control and food extracts. The position statement of the American Academy of Allergy and Immunology[1] regarding provocative and neutralization testing (subcutaneous) concludes:

(1) Subcutaneous provocation and neutralization as a method for the treatment and diagnosis of allergic disease has no plausible rationale or immunologic basis.
(2) Four controlled clinical studies have shown this method of diagnosis and treatment to be ineffective.
(3) Subcutaneous provocation and neutralization treatment should at present be re-

served for use in controlled experiments only.

Likewise, the position statement of the American Academy of Allergy and Immunology[1] regarding provocative testing (sublingual) concludes:

(1) No controlled clinical studies indicating a diagnostic or therapeutic effect of sublingual antigen administration on human atopic diseases are known to the Committee. Moreover, there are no known immunologic mechanisms that can account for the "neutralizing effects" of dilute solutions of allergenic extract.

(2) Since the results of other controlled studies indicate that the method is ineffective, demonstration of the effectiveness of this method for diagnosis and therapy should be the responsibility of the proponents of the method. Until such studies are performed, the method should be considered unproved.

(3) Sublingual provocative testing and desensitization should be reserved for experimental use only in well controlled trials.

The previously stated conclusions of the American Academy of Allergy and Immunology were emphasized by Grieco[2] in JAMA in June 1982.

The leukocytotoxic tests and the provocative and neutralization tests are most often used in evaluating patients with vague symptoms such as headache, various gastrointestinal problems, fatigue, depression, and hyperactivity. Objective assessment of patients with these symptoms is extremely difficult since the physician must rely on what he is told by the patient, or in the case of children, by the parents. Improvement in patients with these symptoms is very subject to the placebo effect! Trial elimination diets can be helpful in these patients, but the physician must be very careful to avoid situations where the patient remains on a diet for long periods of time that might result in dietary deficiencies.

In conclusion, the leukocytotoxic tests and provocative-neutralization testing (subcutaneous and sublingual) are of no proven value. New diagnostic and therapeutic techniques are subject to potential abuse and misuse, and until their validity, safety and cost effectiveness have been established, they should not be used in clinical practice.

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SIGNED:

Kelsy J. Caplinger, M.D.
Vida H. Gordon, M.D.
Thomas G. Johnston, M.D.
Purcell Smith, Jr., M.D.

August 3, 1982

THINGS TO COME

November 12

The 13th Annual James S. Taylor Lecture. "Chronic and Unstable Angina — A Conservative Approach to Management." Sponsored by The Professional Education Committee of The Arkansas Heart Association. Auditorium of Shorey Building, University of Arkansas for Medical Sciences, Little Rock. Two hours Prescribed Credit by AAFP. For further information, contact Dr. James E. Doherty, Veterans Administration Medical Center, 300 East Roosevelt Road, Little Rock 72206.

November 18-20

Clinical Allergy for the Practicing Physician. Washington University School of Medicine, St. Louis, and American Academy of Allergy and Immunology. 19.5 Category I AMA and AAFP Prescribed Credit. For further information, contact Loretta Giacoletto, Office of Continuing Medical Education, Washington University School of Medicine, Box 8063, 660 South Euclid Avenue, St. Louis, Missouri 63110; phone 314-454-3873.

1983

February 24-26

1983 Surgical Update. The Department of Surgery, The University of Texas Health Science Center, Dallas. The Northpark Inn, Dallas. 22 hours Category I AMA and Prescribed AAFP credit. For further information, please phone 214-688-3531.



EDITORIAL

Nonspecific Inflammatory Bowel Disease

Alfred Kahn, Jr., M.D.

"Nonspecific" inflammatory bowel disease usually means Crohn's Disease and ulcerative colitis. These disorders are a problem not alone to the gastroenterologist, but also to the general practicing physician who has to diagnose and care for these patients — internist, surgeon, and general practitioner. At the 1982 meeting of the American College of Physicians in Philadelphia, Pennsylvania, there was an excellent review of this topic presented by N. J. Greenberger and M. S. McPhee. Greenberger made the presentation on the differential diagnosis of Crohn's Disease and pointed out that the differential diagnosis included a variety of different disorders, including infectious enteritis; he specifically cautioned to look for amebiasis, campylobacter, and yersinia. Other disorders in his differential diagnosis include tuberculous enteritis, lymphoma, carcinoid tumor, carcinoma, intestinal lymphangiectasia, ischemic small bowel disease, malabsorptive disorders, and eosiniphilic gastroenteritis. Eosiniphilic gastroenteritis is not commonly seen by practicing physicians and in the course of everyday practice, most physicians do not think of ischemic small bowel disease in the context of a differential diagnosis of Crohn's Disease.

In Greenberger's discussion he brought out how widespread Crohn's Disease can be. It can affect the skin causing erythema nodosum and other inflammatory disorders. It also may cause uveitis, ulcers in the mouth and esophagus; he reports pyloric obstruction occasionally from Crohn's Disease. Of special interest were Greenberger's statements concerning the liver and Crohn's Disease; in Crohn's Disease, fat is often seen in the liver; pericholangitis and cirrhosis are not uncommon; gall stones are prone to occur due to bile salt loss, etc. In the urinary tract, the discussor related that obstructive hydronephrosis occurs as do kidney stones which are frequently due to oxalate formation. Anemia is commonplace. It was also related in the discussion that pulmonary fibrosing alveolitis and vasculitis may occur. Even pancreatitis is seen.

Greenberger recommends assessing activity in Crohn's Disease by a group of things, including fever, weight loss, intra abdominal masses, extra-intestinal manifestations, disease of the rectum, blood count, sedimentation rate, protein balance, potassium levels, and Vitamin B-12 absorption.

Greenberger gave an excellent discussion of the therapy of Crohn's Disease. Sulfasalazine is recommended and seems to be a primary bulwark. Cortico steroids are a secondary line of defense; he recommended some other drugs if necessary, including Azathioprine, 6-Mercapto Purine, and Metronidazole.

This discussor was emphatic about the need for long-term, careful follow-up of patients with Crohn's Disease.

In the same symposium, McPhee discussed the ulcerative colitis and stated that the principal clues to diagnosis were abdominal pain, diarrhea, and rectal bleeding. The sigmoidoscopic examination, he states, is usually characterized with friable bloody mucosa and ulcerations; there are characteristic X-ray findings, including loss of haustral markings, serrations, and increased post-rectal space. McPhee's differential diagnosis for ulcerative colitis includes Crohn's Disease, infectious enteritis, diverticulosis of the colon, ischemic colitis, polyp of the colon, irritable bowel syndrome, malabsorptive disorders, and the so-called "gay bowel" syndrome; with regard to the latter, there is a sizeable amount of literature pertaining to diseases spread by "gays". He stated that ulcerative colitis radiologically was

characterized by shortening of the colon with loss of landmarks as opposed to granulomatous colitis which may affect the large and small bowel and frequently has skipped lesions and fistulas. McPhee states that if there is a stricture in ulcerative colitis it often means carcinoma or a microperforation inasmuch as ulcerative colitis tends to be a purely mucosal disease. McPhee states that he grades ulcerative colitis depending on the number of stools per day and if they are bloody, fever, rapid heart beat, anemia, high red blood cell count, protein balance, potassium, and the presence of bacteremia. McPhee also dwelled on the relationship between liver disease and ulcerative colitis; this is a very important, often overlooked, area; 5% of patients with ulcerative colitis are said to have significant liver disease, including fatty infiltration, pericholangitis, bile duct proliferation, chronic active liver disease, cirrhosis, sclerosing cholangitis and carcinoma of the liver. It is a well known fact that ulcerative colitis is often associated with liver carcinoma and the discussor stated that there were some clues which are helpful in seeking to evaluate the cause of ulcerative colitis, including onset before 50 years, duration of disease greater than 10 years, total involvement of the colon, dysplasia. For therapy McPhee recommended Azulfidine and cortico steroids; the diet which he recommended was one low in sugars and fiber and high in protein and total calories.

This symposium will probably be published in its entirety in American College of Physicians or audio tape and should be of keen interest to all practitioners.

The same topic has been published in the form of a review entitled "Nonspecific Inflammatory Bowel Disease" by J. B. Kirsner and R. G. Shorter (*New England Journal of Medicine,* Volume 306, page 775, April 1, 1982). Kirsner and Shorter specifically state that their review is limited to Crohn's Disease and chronic ulcerative colitis by definition. They define ulcerative colitis as a recurrent inflammatory and ulcerative disease of the colon and rectum which, they state, can be simulated by many other disorders. Crohn's Disease has been described as a subacute and chronic inflammation which involves the entire alimentary canal from the mouth to the rectum; it is said that about 60% of the patients with Crohn's Disease have granulomas present. They are of the opinion that Crohn's Disease can be differentiated from ulcerative colitis in about 80% of the patients — despite the fact there are no true pathognomonic findings in some instances. They list the complications which occur in inflammatory bowel disease, including skin disorders, arthritis, hypercoagulability, obstructive airway disease, Takayasu's arteritis, kidney stones, growth retardation, etc. The authors feel that Crohn's Disease is not a disease of the gastrointestinal tract, but is a systemic disorder. They report that there are findings suggestive of Crohn's Disease in the skin, muscle, mouth, lung, and elsewhere in some cases. The typical appearance of Crohn's Disease under the electron microscope is said to be that of necrosis of the columnar epithelial cells associated with budding of the tips of microvilli. The intestinal villi are said to be thickened, shortened, and irregular; ulcers are present which penetrate the bowel wall; there are lymphoid aggregates; hyperplasia of the goblet cells is almost invariably present. Kirsner and Shorter state there is increased mucous in the bowel in Crohn's Disease and there is reported to be increased glucosamine synthetase activity in the bowel mucosa. Prostaglandins and various kinins are said to be the likely mediators of the inflammation in inflammatory bowel disease. All authors, including Kirsner and Shorter, warn the reader about the increased possibility of carcinoma of the colon if the disease has been present more than seven years. An interesting aside is that carcinoma may occur in relatively uninflammed bowel. Dysplasia is said to be a forerunner of carcinoma of the colon, and, if this is found by colonoscopy, it should be considered a warning. In general, Kirsner and Shorter agree with Greenberger and McPhee with the medical treatment of inflammatory bowel disease.

The second part of Kirsner and Shorter's article is particularly interesting inasmuch as it discusses the etiology of the two diseases under discussion here. For example, attempts have been made to try and discover whether inflammatory bowel disease was familial; there is a suggestion that this is the case. Some bacterial infections can simulate inflammatory bowel disease, but no specific bacteria has been found — and the same is true of viruses. Immune mechanisms have been considered in inflammatory bowel disease and there is certainly evidence that there are immune reactions in inflammatory bowel disease, but whether they are a cause and effect has never

been clearly demonstrated. Kirsner and Shorter summarize their article by saying that a useful hypothesis for explaining inflammatory bowel disease would be along the following lines — the diseases are a single disorder with different tissue manifestation due to the site of an immune reaction, the nature of the antigens, and genetic influences. This postulates that there may be a stimulus of bacteria, virus, allergy, etc., on a susceptible host which sets up an immune reaction that plays some role in the inflammatory bowel disorder. All in all, Kirsner and Shorter have presented a most stimulating and authoritative article on inflammatory bowel disease.

"From Other Years"*

Journal of the Arkansas Medical Society
Vol. 3 No. 9 March 15, 1893 p. 392-393

INCISED WOUND OF ABDOMEN AND INTESTINE

By M. S. Dibrell, M.D., Van Buren, Ark.

On February 14, 1891 (the second year of my practice), at an early hour, 2 a.m., I was called to see T. C. ———, age 19, who was said to have been stabbed. I started for the place, which was a mile away, with my ready packed case. On arriving I found my patient a boy of slender make-up, with feeble, rapid pulse, pale, pinched features and suffering apparent pain. I gave morphia sulph. 1-4 gr. hypodermatically, and proceeded to examine the wound. On raising the covering, I found several dirty towels over the abdomen, and removing them found that I had quite a serious case before me. There was as much as a large wash-basinful of the small intestine lying on the abdomen. Without further examination, I prepared a hot sublimate solution 1:1000, and wrung towels (from my case) out of this and laid over the protruding gut, having one of the bystanders wash his hands in a sublimate solution and reapply the towels as they would seem to get cool. I enveloped the necessary instruments in a bag and boiled them for half an hour, washing my hands and going through antiseptic precautions, preparing sutures, and carbolized solutions for instruments in meantime.

Everything being in readiness, I further examined the wound and found a transverse incision below, an inch to left of umbilicus downward and to the right for about three and a half inches. There was also a transverse cut in the gut almost severing it; here I could see the branches of the superior mesenteric (vasa intestini tenuis), pulsating, having appearance of having been knit together by some accurate measurement. The protruding mass was carefully washed in warm sublimate solution, 1:3000, and incision in gut was closed by means of Lembert's suture with fine aseptic braided silk, the free ends being cut short. The incision in abdominal walls was sufficiently large to allow the protruding mass to be returned with ease, exercising care not to lacerate the bowel where the sutures were situated.

After I had become satisfied that the bowel remaining in the cavity was not injured I returned that which had escaped.

The wound in the abdomen was then closed by four deep sutures, including peritoneum (silk, as I had neither wire nor silk worm gut with me), and three superficial.

The dressing was iodoform sprinkled lightly, iodoformized gauze, sublimate gauze, and over this a lay each of cotton and rubber tissue, the whole being held in position by a roller bandage around the body and rubber adhesive plaster to keep the bandage from slipping. Drainage in this case was not used, as none of the arteries were severed and hemorrhage was very slight. Patient did nicely for several days, pulse being 90, temperature 99. On my morning visit on fifth day, after inquiry, found pulse 140, temperature 100. Fearing that dressing was causing some irritation, removed it, and, to my delight, the wound had appearance of having healed by primary union, no pus being visible, and a narrow red line marking the line of the cut. Redressed, and on sixth day bowels moved without pain or assistance; pulse 140, temperature 103. Examined wound again and found the superficial suture at right angle of incision in abdomen; had been torn out in a fit of restlessness the evening before.

I found then a pus sac under the ext. abdm.-oblique. I punctured it with bistoury at lower

margin, and, to my surprise, a half teacupful of laudable pus (?) exuded. Washed out cavity with a solution of boracic and salicylic acid by means of a fountain syringe; inserted a rubber drainage tube. This complication was dressed with same care as was the original injury; pulse and temperature went down to 90 and 99 respectively. I washed the pus cavity again on general principles at the next dressing, which was three days afterwards, and at the next dressing all had healed kindly. Patient made a slow recovery. Bronchitis having developed during this time, there remains a ventral hernia from partial non-union of aponeuroses of abdominal muscles. For this he wears a suitable support and is otherwise in good health, carrying out his usual occupation as general laborer.

*From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

Major revisions in Medicare and Medicaid and important changes in pension plan provisions are building momentum toward final congressional passage.

Senate approval of a package bill carrying out sweeping program changes and raising some $100 billion in taxes over three years put immediate pressure on the House to follow suit. The Senate vote was along party lines, 50 to 47, on a measure adopted by the Senate Finance Committee.

The Senate bill incorporated both reduced spending and tax hikes as a follow-through to the budget resolution approved earlier by Congress mandating such actions.

The House, compelled to approve a bill similar to the Senate's in order to comply with the budget mandate, in an election-year gamble has agreed to go directly to conference on the Senate's bill to increase taxes by $98.5 billion over three years and impose major new cuts in Medicaid and Medicare.

The House Energy and Commerce Committee approved a bipartisan plan for cutting $2.1 billion over three years from Medicaid and from federal reimbursements to doctors under Medicare.

The savings fell about $160 million short of the budget instructions, but attempts to make deeper cuts were defeated easily.

"At least we controlled the damage," said Health Subcommittee Chairman Henry A. Waxman (D-CA).

Together with Medicare cuts approved earlier by the Ways and Means Committee, the proposed House cuts in the two programs over three years include $700 million from Medicaid and $12.9 billion from Medicare.

The Senate bill provides many reimbursement restrictions on Medicare and Medicaid, with hospitals hit the hardest. The tax side includes provisions making it tougher to claim medical expenses as deductions and limitations on pension plan contributions aimed at discouraging professionals such as physicians from incorporating.

Following are the principal provisions of the Senate bill dealing with health or health-related matters:

TAXES

- Deductions — Federal income tax deductions for medical expenses would be limited to expenses of more than seven percent of adjusted gross income, compared with the current three percent. The present provision for deduction of 50 percent of up to $150 for costs of medical insurance would be limited to half of $100.
- Pensions — One of the most controversial of the tax features, this provision drops the maximum limits on contributions to corporate defined-contribution and defined-benefit pension plans, to $30,000 a year and $90,000 a year, re-

spectively. At the same time, tax deferred contribution limits for Keogh plans for the self-employed would be liberalized, doubling to $30,000 a year after a phase-in period.

- Federal Employes — For the first time, federal workers would be brought under the Medicare program (but not regular Social Security) and be required to pay the hospital tax, netting the government $2.3 billion in added revenues over the next three fiscal years.

SPENDING

More than $4 billion a year would be saved by the government for Medicare and Medicaid under a series of provisions that included many sought earlier in the year by the Reagan Administration. Most of the cuts in projected outlays affect the Medicare program, especially hospitals and physicians.

The Medicare spending provisions include:

- Physician Reimbursement — Freezes reimbursement for 1983 and allows only a 5 percent increase for 1984.
- Hospital-Based — Only hospital costs allocated to physicians' services to the hospital would be allowable in determining the hospital's cost reimbursement and these costs would be subject to limits.
- Surgery — Prohibits reimbursement for assistants at surgery in hospitals where a training program exists in surgery except under "exceptional medical circumstances."
- Radiology-Pathology — Reduces reimbursement for inpatient services to 80 percent from the present 100 percent of reasonable charges.
- Peer Review — The Health and Human Services Department would be required to contract for utilization and quality control peer review.
- Hospital Reimbursement — Limits increases generally to 10 percent annually.
- Ancillary — Lab services, X-rays and other ancillary costs would be brought under the Section 223 limits that restrict increases to no more than 108 percent of the costs for these services incurred by other hospitals of the same type.

At about the same time as the tax spending bill came before the Senate, the House Ways and Means Committee approved in a rare closed-door session a budget measure dealing only with Medicare. Many of the provisions were identical or similar to those of the Senate bill, but there were several important differences. The Ways and Means bill set spending targets or caps for hospitals in various groupings, a plan endorsed by the American Hospital Association and the Federation of American Hospitals.

The Senate bill and the Ways and Means measure endorse the concept of prospective reimbursement for hospitals, but offer no specific plans for carrying out the idea, which is under study by the Administration. The House bill calls for a voucher system to allow Medicare beneficiaries to pay for private coverage with a Medicare voucher.

Medicare beneficiaries would be allowed to enroll in qualified Health Maintenance Organizations (HMOs) with the government paying a premium equal to 95 percent of the average area per capita cost for Medicare patients. The HHS Department would have to devise a way to work the HMO plan.

The House bill also provides Medicare reimbursement for hospice services for the terminally ill, one of the few added benefits in the legislation.

Dropped from present law would be the provision requiring a three-day hospitalization before admittance to a skilled nursing facility.

* * * *

Prior to the House's unusual action of going directly to conference on the Senate bill, the American Medical Association testified before a House Energy and Commerce Subcommittee on the Senate proposed Medicare and Medicaid cuts.

The Association favored most of the Senate's Medicaid cuts and opposed most of its proposals to change the Medicare program.

Before addressing the proposed cuts in detail, AMA Executive Vice President James H. Sammons, M.D., urged subcommittee members to "—bear in mind that program changes made with the goal of short-term budgetary savings are not going to solve the long-term needs of this nation. The AMA is planning a comprehensive examination of the long-term problems and has committed itself to work for their solutions. This study is in its initial stages."

In its testimony the AMA opposed the Senate's package of Medicare Part B cuts that would:

- Tighten reimbursement of hospital-based physicians by allowing the Health and Human Services Secretary to determine "reasonable compensation levels" and by allowing reimbursement only for services directly provided to patients.
- Prohibit payments for drugs whose effective-

ness has not been established by the Food and Drug Administration.

- Reduce physician reimbursement for hospital outpatient services by an amount reflecting hospital overhead.
- Prohibit reimbursement for assistants at surgery in hospitals with surgery training programs.
- Allow prospective reimbursement of Health Maintenance Organizations for services to Medicare beneficiaries at 95% of the local Medicare average per capita cost. (Ways and Means also has endorsed the latter three proposals.)
- Require review of Medicare services by peer review groups similar to professional standards review organizations or by Medicare carriers.

Dr. Sammons noted that the AMA supported experimentation with the HMO proposal, but expressed concern about a provision requiring HMOs to provide extra benefits to Medicare patients if reimbursement exceeds overall costs. "This will effectively establish two classes of benefits," he said. Instead, savings should be returned to the program to benefit all Medicare recipients.

The AMA supported Part B changes that would reimburse inpatient radiology and pathology services at 80 percent of reasonable charges instead of 100 percent as now allowed; repeal optometric coverage for services to patients after cateract surgery; delay eligibility to the month following a beneficiary's 65th birthday; require employers to maintain private insurance for Medicare-eligible employees; index the Part B deductible to reflect inflation, using the medical component of the Consumer Price Index; and fix the Part B premium as a percentage of program costs.

Dr. Sammons noted, however, that if the current trend of cost increases continues, future beneficiaries could be faced with substantial premium expenses.

Repeal of the nursing differential, advocated by the Senate bill, could shift costs to non-Medicare patients, Dr. Sammons told the subcommittee. Commenting on other proposed Medicare cuts, Dr. Sammons said the Association supported imposing minimal copayments for home health services, as well as eliminating the three-day prior hospitalization requirement for skilled nursing coverage.

The AMA opposed establishing a single reimbursement rate for services provided by skilled nursing facilities and home health agencies and called for further study before eliminating the private room "subsidy."

In conclusion, Dr. Sammons again expressed the AMA's concern about making short-term or piecemeal solutions through the budget process. Referring to the Association's organization of a broad-based study of national health policy, he said, "We expect that the results of this study will suggest major reforms in the government's role in the health care of individual citizens. . . . We hope it will be possible to make the necessary short-term savings and changes now and later more basic long-term changes that will stem from the results of the health policy study."

* * * *

Impaired physician programs may serve as a model for other professions and occupations that seek to deal with members who suffer from alcoholism and other forms of drug dependence, the AMA has told Congress.

William Rial, M.D., AMA president, told a Senate Labor and Human Resources Subcommittee that the medical profession was one of the first professions to confront the fact that some of its members suffered impairments and was the first to take action to deal with the problem.

With the active encouragement of the AMA, medical societies in all states have established programs to attempt early identification and treatment for impaired physicians, Dr. Rial testified.

Dr. Rial was accompanied by LeClair Bissell, M.D., a member of the AMA Panel on Physician Mortality and the AMA Panel on Alcoholism.

The physicians pointed to "a high recovery rate by physicians who undergo treatment as part of the program," in the range of two-thirds to three-fourths of the participants.

Dr. Rial said that physicians appear to have the same rate of alcoholism as found in the general population and may be "somewhat more susceptible" to drug dependency because of greater accessibility to drugs, "of the two, alcoholism most likely represents the greater problem in terms of numbers of physicians affected."

The AMA has been very active in stimulating programs to assist impaired physicians and to encourage appropriate disciplinary actions to protect the public, Dr. Rial said.

* * * *

The AMA has protested a proposed regulation that would allow Health Maintenance Organizations (HMOs) to be forgiven repayment of federal grants despite changing from non-profit to for-profit HMOs.

"To amend these regulations now and allow profit-making entities to take advantage of the public funds received by the not-for-profit HMO is highly inappropriate," the AMA told the Health and Human Services Department.

The regulation would give the HHS Secretary authority to waive all or part of the grant repayment in such cases.

AMA Executive Vice President James Sammons, M.D., wrote that "in light of a projected budget deficit of over $100 billion in fiscal year 1983, we believe that it would be prudent for the Office of Health Maintenance Organization to insist on fulfillment of financial obligations undertaken by HMOs and recapture grant money given to HMOs by the federal government upon conversion to for-profit status."

The AMA told the HHS Department that "federal government intervention, particularly in the promotion of HMOs, has interfered with the operation of a pluralistic system for consumer choice."

To waive the repayment requirement would be "but another example of preferential treatment being given to HMOs by the federal government," said the AMA.

* * * *

Independent expenditures for political candidates represent "a basic element for our democracy and should be encouraged and supported," the American Medical Political Action Committee (AMPAC) has told Congress.

Independent expenditures are contributions or activities made on behalf of candidates without the previous knowledge of the candidates and without any consultation with the candidates. In 1976 the Supreme Court held that such expenditures are free of the campaign contribution limitations that apply to other campaign funding.

Michael Levis, M.D., a member of the AMPAC Board of Directors, told the Task Force on Elections of the House Administration Committee that an independent expenditure is an activity involving the exercise of the right of free speech concerning a political campaign.

Dr. Levis said that AMPAC carries out its program of independent expenditures by articulating support for a candidate "and we do not choose to campaign against someone we do not support. This is a decision that we made at the start of our independent expenditure activity and is a cornerstone of our policy."

AMPAC has budgeted about $350,000 for independent expenditures during the 1982 elections. The money will be spent on radio and TV spots and direct mail.

The AMPAC official said tight controls are maintained on such funds to assure that no AMPAC officer has had any communication with the candidates involved.

To date this year, AMPAC has received contributions from some 42,000 people — primarily physician members of the American Medical Association and state medical societies — averaging about $25 per person. "Thus AMPAC serves as a means by which a large number of small contributors can pool their resources to more effectively participate in the political process," said Dr. Levis.

In 1978, AMPAC spent about $48,500 on two independent expenditures programs. One involved advertisements in local editions of national magazines; the other, campaign buttons for candidates in 10 congressional districts.

During the 1980 elections AMPAC spent $170,000 for television spots for seven candidates and direct mail for another seven.

Assessing the effectiveness of these programs, Dr. Levis said the magazine ads may have been effective in promoting awareness of the candidates, the campaign buttons may have helped to increase name recognition, and that the direct mail brochure appeared to have the most impact, probably influencing the results. Television spots apparently improved the attitude of voters, particularly undecided voters, toward the candidates who were supported.

"It thus appears that carefully planned, positive independent expenditures may increase the chances of election of the candidate who is supported," Dr. Levis said.

* * * *

Maintaining a hard-line policy on "antitrust and health," the Supreme Court has held (6-3) that peer review panels for health insurance claims evaluation are subject to attack under the federal antitrust laws.

The case at hand involved a New York chiropractor who challenged a chiropractic review panel for Union Labor Life Insurance Co., whose

health insurance policies contain some chiropractic benefits. The chiropractor, some of whose claims were disputed by the review panel, brought suit charging that the review group was a vehicle for a conspiracy to fix prices of chiropractors.

The high court's decision, which obviously applies to all such peer review groups including those composed of physicians, centered on the important legal question of whether the activities of these review committees can be considered part of the business of insurance. The majority of the court held that it was not part of the business of insurance, and thus not exempt from the scope of the federal antitrust laws.

In their dissent, Justices Rehnquist, O'Connor and Chief Justice Burger said "There can be little doubt that today's decision will vastly curtail the peer review process. Few professionals or companies will be willing to expose themselves to possible antitrust liability through such activity."

* * * *

MEFFA LECTURE SERIES

Dr. Robert Watson, president of the Medical Education Foundation for Arkansas, has announced that MEFFA will again sponsor a lecture series during the 1982-83 school year at the University of Arkansas for Medical Sciences.

Several departments at the Medical Center have scheduled clinicians/scientists for lectures. Six outstanding educators from other institutions throughout the United States will make presentations to the student body during the academic year. Subjects to be discussed include Pulmonary Pathology, New Concepts in Cancer, Nuclear Matrix and Control of Replication, Human Destiny, Medical Toxicology and Drug Metabolism, Pediatric Neurosurgery, Mycology, and the Medical Ethics of Euthanasia and Abortion.

The Medical Education Foundation for Arkansas was created by the Arkansas Medical Society for the purpose of promotion of the art and science of medicine and the betterment of the health of the public. MEFFA is supported by an allocation of State Medical Society dues. Dr. Martin Eisele of Hot Springs is secretary of the Foundation, and other Board members are Dr. Joe Rushton of Magnolia and Dr. Jean Gladden of Harrison.

The Foundation sponsors the lectures series at the University for student and faculty as a means of bettering medical education in Arkansas.

* * * *

PROCEEDINGS OF THE COUNCIL
COUNCIL MINUTES
JULY 11, 1982

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, July 11, 1982, in the Camelot Inn, Little Rock. Present were Burge, Henry, Smith, Wallick, Shuffield, J. Kolb, Lawson, Lytle, J. Bell, P. Bell, Hestir, Langston, Sanders, Warren, Joyce, Armstrong, Bracken, Jouett, Jones, Logan, Williams, Pearson, Wilkins, Lilly, Watson, Saltzman, Verser, P. Kolb, Andrews, Kutait, Phillips, Thomas, Bruce, Bob Benafield, Milton Deneke, Sam Koenig, Mrs. Herbert Taylor, Mr. Mitchell, C. C. Long, Miss Richmond and Mr. LaMastus.

Chairman Burge introduced new members of the Council present: First Vice President Paul Wallick, and Councilors Larry Lawson, James D. Armstrong, Ronald Bracken, and Charles Logan. New Councilors Frank Morgan and Harold Purdy were not present.

The Council transacted business as follows:

1. Chairman Burge announced the resignation of one of the councilors from the seventh district, Jerry Mann. Dr. Bracken nominated E. K. Clardy of Hot Springs for the position and he was unanimously elected.
2. The Councilors from the Eighth District arranged a drawing for terms of office. Terms are: Charles Logan will serve one year; William Jones, Frank Morgan and Harold Purdy will serve two years .
3. Mr. Mitchell reported on a meeting of the Association of Medical Society Legal Counsel. He reported on the order of the Federal Trade Commission prohibiting certain activities by the American Medical Association and its constituent associations and on a number of other developments across the country involving the medical profession. Upon motion of Shuffield, the Council voted to write the Attorney General and the Insurance Commissioner for the State of Arkansas about the potential hazard of companies with inadequate financial backing coming to the State offering prepaid plans for various types of insurance.
4. The Council received a report from the delegate to the American Medical Association on the annual meeting of the AMA.
5. Upon motion of Smith, the Council voted to authorize three additional luncheon meet-

ings of the Medicine-Business Coalition. The three luncheon meetings with business leaders are planned for Texarkana, northeast Arkansas and Fayetteville.

6. Upon motion of Sanders, the Council authorized Medical Society sponsorship of a social hour in conjunction with a planned conference in Little Rock this fall between medicine and business leaders.
7. Upon motion of Lilly, the Council names Charles H. Rodgers as vice chairman of the Medical Services Review Committee.
8. The Council reappointed the following to positions on the Arkansas State Arbitration Commission:

 First District Milton Deneke, West Memphis
 Fourth District Banks Blackwell, Pine Bluff
 Seventh District .. Thomas M. Durham, Jr., Hot Springs
 Eighth District H. Austin Grimes, Little Rock

9. The Council, upon motion of Warren, approved the report of the Executive Committee for May 17th and May 26th meetings:

 MAY 17, 1982

 The Executive Committee met by conference telephone on May 17th with Chairman Burge, President Henry, President-elect Crow, Secretary Shuffield, Immediate Past President Smith, Executive Vice President Long and Associate Executive Vice President Richmond participating.

 The Executive Committee voted to change the date of the 1983 Annual Session to April 28th through May 1st. The meeting is to be held in Fayetteville.

 NOTE: After this action was taken and reported to the Hilton Hotel in Fayetteville, the headquarters office was advised that the hotel had overlooked a booking which prohibited our having the hotel April 28-May 1. The Executive Committee reconsidered this matter on June 23, 1982, and agreed to reschedule the 1983 annual session for May 5-8 at the Hilton in Fayetteville.

 MAY 26, 1982

 The Executive Committee met on Wednesday, May 26, 1982, at the Sam Peck Hotel at 12:00 noon. All members of the Executive Committee were present: Dr. John P. Burge, chairman of the Council; Dr. Morriss Henry, president; Dr. Asa Crow, president-elect; Dr. Elvin Shuffield, secretary; Dr. Purcell Smith, Jr., immediate past president; and Dr. C. C. Long.

 The following business was transacted:

 1. Received a letter from an attorney in Little Rock, Mr. William Crow, requesting space for advertising in the Journal of the Arkansas Medical Society. The Executive Committee voted to advise Mr. Crowe that the Journal did not accept non-medical advertising and thank him for his interest.
 2. Approved the financing of the Medicine-Business Coalition Committee meetings for several areas of the State. Said meetings are to include a luncheon for the attendees.

10. The Council received information on a meeting held between officers of the Society and the Director of the Arkansas Department of Human Services regarding a demonstration project proposal by Beverly Enterprises for a pre-paid, long-term care program under Medicare. The Council also heard a report on a meeting with Governor White on health care issues.
11. Upon motion of Williams, the Council approved a lease for approximately one-third of the second floor of the office building in Fort Smith for a period from July 1982 to October 1983 at $250 per month.
12. The Council received for information a suggestion from Dr. S. B. Thompson for establishment of a Specialty Society Advisory Committee.
13. Upon motion of Warren, the Council voted to authorize the chairman to appoint a committee to study the establishment of a resident physician section at the State Society level.
14. Voted to request Woodbridge Morris to accept appointment to the Long Term Care Facility Advisory Board in order to comply with the law which mandates that one member of the Board be a physician.
15. Upon motion of Lilly, the Council voted to appoint a committee to study Journal advertising and bring recommendations to the Council for action.
16. Upon motion of J. Kolb, the Council ap-

proved position papers on the following subjects:

Chiropractic
Rape
Tobacco

17. The Council received for information an experience rating report on the Arkansas Medical Society group plan with Blue Cross-Blue Shield.
18. Upon motion of Jones, the Council voted to respond to a request from the Arkansas Hospital Association Auxiliary with a statement that the Council is not in a position to commit the members of the Society who do take Medicare/Medicaid assignment to a published listing to that effect or to lend any financial support to such a project.
19. Upon motion of Warren, the Council voted to schedule a winter meeting in Little Rock on November 14.
20. Ray Jouett, speaking as president of the Pulaski County Medical Society, reported to the Council on the county society's referendum on affiliation with the Arkansas Medical Society. He reported that approximately 260 of the 680 polled voted to remain affiliated with the State Society and that the county society would, therefore, remain a part of the State Society.

The Council went into Executive Session for a report from legal counsel on the pension plan. Minutes for the Executive Session are separate.

APPROVED: John P. Burge, M.D.
Chairman of the Council

ARKANSAS MEDICAL SOCIETY
EXECUTIVE COUNCIL
MINUTES OF EXECUTIVE SESSION
JULY 11, 1982
CAMELOT HOTEL

Mike Mitchell, Society attorney, reported on the pension plan. The termination of the old plan has been referred to the IRS for its approval. The PBGC has already issued its letter approving the old plan. All employees have elected a lump sum settlement of benefits under the old plan. A short discussion was held with respect to Ms. Richmond's proposal. Mr. Mitchell reports a letter of counter-proposal which will be presented to the pension board for recommendation and brought back to the Council.

Revision of the new plan is under way and it should be completed for adoption by the next Council meeting. Slight changes are being made in a few points.

There being no further business, the Executive Session adjourned.

APPROVED: John P. Burge, M.D.
Chairman of the Council



keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

EMERGENCY MEDICINE UPDATE '82

Presented by the Department of Medical Education, *8:00 to 5:30 November 11, 7:00 p.m. to 1:00 a.m.,* Basic CPR, *8:00 a.m. to 5:30 p.m., November 12, 7:30,* State A.C.E.P. Meeting, *8:00 to 12:00, November 13.* Sponsored by Baptist Medical Center. Twenty hours Category I credit. Registration: $125 for physicans, $50 for nurses.

WHAT YOU ASKED FOR IN FAMILY PRACTICE

Presented by Ben Saltzman, M.D., *November 13, 8:00 a.m. to 5:00 p.m.,* State Health Department Auditorium. Sponsored by UAMS. Six and one-half hours Category I credit. Fees unknown.

SURGICAL EMERGENCIES OF CHILDHOOD

Presented by E. Steve Golladay, M.D., Department of Pediatric Surgery, UAMS, *November 16,*

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

CEPHALOSPORIN — OLD AND NEW

Presented by Robert Wilder Bradsher, Jr., M.D., Department of Medicine, UAMS, *December 7, 7:00 p.m.*, In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

WHAT'S NEW IN T.B.
(with emphasis on short course chemotherapy)

Presented by William W. Stead, M.D., *December 8, 9, 10, 8:30 a.m. to 5:00 p.m.*, Camelot Hotel, Little Rock. Sponsored by UAMS. Seventeen hours Category I credit. Registration fee: $100.00 (includes two lunches and one dinner). Registration limited to 200.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, third Tuesday, 12:15 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conferences, first and second Friday, 12:15 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, November 13, 27 and December 11, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Radiology Conference, first and third Tuesday, 1:00 p.m., Conference Room.
Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange: November, Dr. Peter Kohler, Endocrinologist. One hour Category I credit. December, Dr. E. Clinton Texter, Gastroenterologist. One hour Category I credit.

FORT SMITH — AHEC

Cancer Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-NE

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday in November, first and second Tuesday in December, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, November 4, 11, 16; December 2, 9, 16, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, November 3, 17; December 1, 15, 8:15 a.m., Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Auditorium. Six hours Category I credit.
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Mouth, second Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
GI Roundup, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Cardiology Conference, December 30, 7:00 p.m. to 8:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, November 11, 18; December 10, 17, 24, 31, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Dining Room #3.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., Doctors Hospital in October; St. Vincent Infirmary in November.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S1169 Laboratory.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing, Room #1.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

PINE BLUFF — AHEC

Family Practice Interesting Case Conference, each Monday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
OB/GYN Conference, second Tuesday each month, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Radiology Conference, each third Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Family Practice Residents' Conference, each first, fourth, and fifth Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Surgery Conference, each first Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Internal Medicine Conference, each second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Pediatric Conference, each third Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Behavioral Sciences Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Chest Conference, each first and third Friday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Southeast Arkansas Medical Lecture Series, each fourth Tuesday, 7:00 p.m., Colonial Steak House or Rosswood Country Club, Pine Bluff.

TEXARKANA — AHEC-SW

AHEC Tumor Conference, first Wednesday, 7:00 a.m., Classroom B, St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., Classroom B, St. Michael Hospital.



PERSONAL AND NEWS ITEMS

DR. BUFFINGTON RELOCATES

Dr. Mike Buffington, formerly of DeQueen, has moved to Magnolia. His office is located at 105 West North Street.

HOSPITAL DIRECTORS

Drs. William L. Mason, John R. Hampton, John C. Lewellen, John D. Pike, Ben O. Price, and Ben D. Johnson have been named medical directors of the Special Care Units at Doctors Hospital in Little Rock.

DR. HESTER

Dr. Joe Hester, an Ophthalmologist, has joined the Ouachita Clinic in Camden.

DR. HUDSON SPEAKS

Dr. William A. Hudson of Jasper recently addressed a meeting of the American Lung Association of Arkansas in Harrison.

DR. CARD

Dr. Shannon R. Card, a Family Physician, has joined the Northwest Arkansas Medical Center in Berryville.

JONESBORO PROGRAM

Dr. O. H. Clopton of Jonesboro and Dr. Ben Saltzman, director of the State Health Department, participated in a Jonesboro television program on hypertension in August.

DR. SESSLER

Dr. Lon H. Sessler has joined the Austin Medical Clinic in Mena.

DOCTORS HONORED

The Saline Memorial Hospital has given special recognition to area physicians. Dr. Quin Baber of Benton was honored for his twenty years of service and Dr. Robert Ashby of Benton was honored for his ten years of service. Dr. Ralph Cash of Benton received a plaque of appreciation as out-going chief of staff.

NEWPORT GAINS PHYSICIANS

Three physicians have joined the medical staff of the Newport Hospital and Clinic. Dr. Donald Schaffer specializes in Obstetrics and Gynecology, Dr. Valerie Schaffer practices Emergency Medicine and Dr. Dalal Jacob specializes in Pathology.

DR. SALTZMAN SPEAKS

Dr. Ben Saltzman of Little Rock spoke on future funding for health care at a meeting of the Board of Directors of the Jefferson Comprehensive Care Center.

DR. FENAUGHTY

Dr. Frank Fenaughty has opened his office for General Practice at the Osceola Memorial Hospital.

DR. MAGIE IN PERU

Dr. Jim Magie of Conway and his family attended the 1982 Miss Universe Pageant in Lima, Peru.

DR. REILLY

Dr. Jim Reilly has opened his office in the Webb Memorial Clinic in Hector.

DR. CORBELL MOVES

Dr. Edward Corbell, formerly of Little Rock, has established a General Surgery practice in Prescott.

DR. FREDERICK

Dr. W. O. Frederick has opened his office at 101 Third Street in Helena. Dr. Frederick specializes in Ophthalmology.

PARIS DOCTORS

Drs. Wayne Enns and Jerry Baskerville of Paris have organized an Emergency Services Awareness Group to work on the problem of emergency service in the area.

DR. ROAF HONORED

Dr. Sterling A. Roaf of Pine Bluff is the 1982 recipient of the "Family Practice Teacher of the Year Award" given by residents of the AHEC-Pine Bluff Family Practice Residency Program. Previous recipients are Dr. W. Joseph James of Pine Bluff, 1980, and Dr. James A. Lindsey, also of Pine Bluff, 1981.

HOPE GAINS PHYSICIANS

Dr. Johnny Jones, an obstetrician-gynecologist, has joined the Hope Doctors Clinic. Dr. Akshay Desai, a cardiologist, has opened his office in the Hempstead County Memorial Hospital.

DR. BURKE

Dr. Bryan Burke, Jr., has joined the Children's Clinic in Pine Bluff for the practice of Pediatrics.

DR. SMITH SPEAKS

Dr. Paul L. Smith of Pine Bluff was the featured speaker for a Mission Day Program at the Lonoke Baptist Church.

DR. DUNAWAY

Dr. Geoffrey Dunaway has joined the Family Practice Clinics in Harrison and Jasper.

DR. KRZYMOWSKI

Dr. George Krzymowski has joined the Imboden Medical Clinic.

DR. AVINER SPEAKS

Dr. Zvi Aviner of Blytheville spoke on Glaucoma at a Kiwanis meeting in Osceola.

DR. ROOSA IN BULL SHOALS

Dr. Clifford Roosa has opened an office for General Practice at the Bull Shoals Hospital.

DR. PATTON

Dr. Curt Patton, a Pediatrician, has located in Forrest City.

DR. BARRON

Dr. William Barron, a Family Physician, has joined the Williams-Lowrey Clinic in Russellville.

DR. APPLEGATE HONORED

Dr. Stanley Applegate of Springdale was recently honored by The Arkansas Community Development Program. He received an "Exceptional Accomplishment Award." Dr. Applegate was recognized for his work with the Springdale Industrial Commission. He is a past president of the Springdale Chamber of Commerce and is currently Chairman of the Industrial Committee, a position he has held for a number of years. The Springdale Industrial Commission and the Industrial Committee have been very active in getting new industries located in the area. Dr. Applegate has been a leader in Industrial contact work.

OBITUARY

DR. LLOYD S. ROLUFS

Dr. Rolufs of Eureka Springs died August 1, 1982; he was born November 18, 1910, in Herculaneum, Missouri.

Dr. Rolufs received a Bachelor of Science degree from the University of Missouri at Rolla. He was graduated magna cum laude from the St. Louis University School of Medicine in 1938. While at St. Louis University, he was a teaching Fellow in Bacteriology. His internship was with the United States Marine Hospital in Norfolk, Virginia.

During World War II, Dr. Rolufs served with the United States Coast Guard and received a distinguished service citation from President Roosevelt.

Dr. Rolufs did postgraduate Surgery training at the University of Michigan Affiliated Hospitals. His residency was with the United States Marine Hospital in Staten Island, New York. He served as a Demonstrator of Anatomy at New York Medical College. In 1948, Dr. Rolufs was appointed Deputy Chief of Surgery at the U. S. Marine Hospital on Staten Island. From 1950 to 1970, he served as Chief of Surgery at St. Joseph Hospital in Kirkwood, Missouri, and was on the teaching staff of the Department of Surgery at the St. Louis University School of Medicine. Dr. Rolufs was certified by the American Board of Surgery in 1952.

Dr. Rolufs is survived by his wife, Irene, one daughter and one stepson.

DR. WILLIAM J. RHINEHART

Dr. Rhinehart died August 29, 1982; he was born September 23, 1919, in Little Rock.

Dr. Rhinehart was graduated from the University of Illinois in 1940. He was graduated from Northwestern University Medical School in 1944. His internship and residency were with the Pennsylvania Hospital in Philadelphia and with the Children's Hospital of Philadelphia. He was a member of the United States Army for two years.

Dr. Rhinehart returned to Little Rock in 1950 and joined his father, Dr. Damon A. Rhinehart, and his uncle for the practice of Radiology. In 1965, Dr. Rhinehart joined other physicians to found the Radiology Associates, P.A., of Little Rock. He was a Fellow of the American College of Radiology.

Dr. Rhinehart is survived by his wife, Virginia Dieck Rhinehart, two daughters and one son.

DR. HAROLD B. WRIGHT

Dr. Wright of Waldron died September 7, 1982. He was born August 28, 1919, in Paraloma.

Dr. Wright received his pre-med education at Magnolia A&M College. He was graduated from the University of Arkansas College of Medicine in 1944. From 1945 to 1946, he practiced at City-County Hospital in El Paso, Texas. Dr. Wright served with the United States Army in Hawaii and the South Pacific from 1946 to 1948.

Dr. Wright moved to Waldron in 1948. He was instrumental in the opening of the Scott County Hospital. He served as chief of staff at the Hospital for many years and was serving as chairman of the board of governors when the hospital was purchased by St. Edward Mercy Medical Center in Fort Smith. He was a member of the board of governors of Mercy Hospital of Scott County and county health officer at the time of his death.

Dr. Wright had served as president of the school board for twenty years and had served on the city council. For eighteen years, he had taught the Friendship Sunday School Class at the Waldron United Methodist Church.

Dr. Wright is survived by his wife, Elsie Holland Wright, two daughters and one son.

DR. L. L. HUBENER

Dr. Hubener of Blytheville died September 13, 1982. He was born January 4, 1905, in McComb, Mississippi. His pre-med education was at Tulane University in New Orleans, Louisiana, and Drury College in Springfield, Missouri.

In 1929, Dr. Hubener was graduated from the University of Arkansas College of Medicine. He was also a graduate of New York Poly Clinic.

Dr. Hubener practiced for four years in Tribune, Kansas. Before moving to Blytheville, Dr. Hubener practiced obstetrics and gynecology in Little Rock and was a member of the Pulaski County Medical Society. He practiced General Medicine and General Surgery in Blytheville.

Dr. Hubener was a life member of the Arkansas Medical Society, a member of the Fifty Year Club of the Society, a member of the Arkansas Civil Air Patrol and a Mason.

He is survived by his wife, Irene Dulfey Hubener, one son and his brother, Dr. Louis F. Hubener of Gainesville, Florida.



NEW MEMBERS

DR. JOHN V. WHITE

Dr. White is a new member of the Baxter County Medical Society. He was born in Sand Springs, Oklahoma. He served with the United States Naval Reserve from 1943 to 1946.

Dr. White received a B.S. degree from the University of Oklahoma in 1954. He was graduated from the University of Oklahoma College of Medicine in 1958. Dr. White's internship was at St. John's Hospital in Tulsa and he also completed one year of surgical residency at that institution. He later had a Psychiatry residency at Cherokee Mental Health Institute in Cherokee, Iowa.

Dr. White was in general practice at Tulsa for four years after leaving St. John's. He then served as staff physician at Hisson Memorial Center in Sand Springs, as Medical Director of the Arizon's Children Colony, Superintendent of the Hospital for Mentally Retarded in Delaware, Superintendent of the Macomb Regional Retardation Center in Michigan, and Superintendent of the Mascatatuck State School and Training Center in Indiana.

After a year at the Mental Health Institute in Cherokee, he practiced in Big Spring, Texas, and was Clinical Director and Assistant Superintendent of the Rusk State Hospital in Texas. In 1979, he became Medical Director for the Benton Service Center. He was associated with the Mental Health Center in Jonesboro prior to locating in Mountain Home with the Ozark Regional Mental Health Center.

Dr. White is eligible for the board examination in Psychiatry. His mailing address is Post Office Box 487, Mountain Home 72653.

DR. W. H. GOODIN, JR.

Dr. Goodin, a native of Batesville, has joined the Independence County Medical Society.

Dr. Goodin is a 1970 graduate of the David Lipscomb College in Nashville, Tennessee, and a 1974 graduate of the University of Arkansas College of Medicine. His Neuropsychiatry residency was with Vanderbilt University Hospital in Nashville.

After completing his training, Dr. Goodin was in private practice in Dallas and Richardson, Texas. He held the position of chairman of the Department of Psychiatry at the Richardson Medical Center.

Dr. Goodin specializes in Neuropsychiatry. His office is located at 407 Virginia Drive in Batesville.

DR. BERNARD KORDAN

Dr. Kordan is a new member of the Phillips County Medical Society. He is a native of St. Louis, Missouri.

Dr. Kordan is a 1944 graduate of the University of California at Berkeley and a 1946 graduate of the University of California School of Medicine at San Francisco. He served a Medicine internship and Radiology residency at the University of California Hospital in San Francisco. Dr. Kordan was a Research Fellow at Mt. Zion Hospital in San Francisco following his residency.

From 1952 to 1955, Dr. Kordan was in the private practice of Radiology at Sacramento. He then served for two years with the United States Public Health Service in the District of Columbia. From 1957 to 1962, he was an Assistant Professor of Radiology at the University of Southern California School of Medicine. Dr. Kordan was then in private practice for fourteen years at Maywood, California. He was associated with the Long Beach Memorial Hospital from 1977 to 1978 and with the Los Angeles County Health Services until he came to Arkansas. While in California, he also served as clinical instructor at Stanford and Loma Linda Medical Schools.

Dr. Kordan is board certified in Radiology and Nuclear Medicine. He is a Fellow of the American College of Radiology and an Associate Fellow of the American College of Cardiology.

Dr. Kordan specializes in Radiology, Nuclear Medicine and Diagnostic Ultrasound at Helena Hospital in Helena.

DR. JOE F. BRADLEY

Dr. Bradley is a new member of the Sebastian County Medical Society. He was born in Clinton.

Dr. Bradley attended Arkansas Tech University for his pre-med education. He is a 1977 graduate of the University of Arkansas College of Medicine. His Psychiatry internship and residency were with the Medical Center from 1977 to 1981.

Dr. Bradley joined the Baker Psychiatric Clinic, Fort Smith, in 1981. His address is 2112 South Greenwood.

DR. RICK J. LEWIS

Dr. Lewis, a native of Adrian, Minnesota, has joined the Union County Medical Society.

In 1972, Dr. Lewis received an A.A. degree from Worthington State Junior College and in 1974 a B.S. degree from the University of Minnesota in Minneapolis/St. Paul. He is a 1978 graduate of the University of Minnesota Medical School in Minneapolis. Dr. Lewis trained in Pediatrics at Rhode Island Hospitals in Providence. He passed Part I of the Pediatrics board examination.

Dr. Lewis began practice with the National Health Services Corps in Hampton, Arkansas, in October 1981. His address is CABUN Rural Health Services, Post Office Box 851, Hampton.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The ECG shows the potient to be in sinus rhythm. Significont ST elevotian is present in I, AVL, and V_2 - V_5 and ST depression is noted in II, III, and AVF. The R-woves progress poorly in leads V_1 - V_5 ond borderline Q-woves are nated in I, AVL, ond V_5. These chonges, alang with his history, strongly suggest acute onteriar myacordiol infarction and most physicions wauld toilor their treatment accordingly.

November, 1982

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 79 No. 6

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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to this membership.

SCIENTIFIC ARTICLES

Campylobacter Gastroenteritis in Arkansas 191
John May, BSMT (ASCP) MS, Debbie Spinks, BSMT (ASCP), Kent Estes, BSM (ASCP), and Rebecca McAtee, BSMT (ASCP)

The Management of Insulin-Dependent Diabetes in Pregnancy 194
Kathryn M. Webster, M.D., Paula J. Anderson, M.D., and David L. Vesely, M.D., Ph.D.

FEATURES

ECG of the Month 199
John W. Watson, M.D.

Office Orthopaedics: "Runners' Injuries About the Knee" 200
Richard A. Nix, M.D.

Editorial: "Congestive Cardiomyopathy" 206
Alfred Kahn, Jr., M.D.

From Other Years 207

Medicine in the News 208

Proceedings of the Council 211

Keeping Up 213

Personal and News Items 215

Things to Come 215

Obituary 216

Resolutions 216

New Members 217

Committees — Arkansas Medical Society 218

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Campylobacter Gastroenteritis in Arkansas

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INTRODUCTION

Campylobacter jejuni is rapidly becoming recognized as a leading cause of bacterial diarrhea.[1] Since first being cultured in association with human diarrhea in 1971,[2] advancements in culture technique[3] have made it possible for laboratories of almost any size to culture for *Campylobacter* effectively and inexpensively.

This report deals with campylobacter gastroenteritis seen at North Little Rock Memorial Hospital during a 12 month period from September 1, 1980 to September 1, 1981. The rate of isolation and characteristics of the disease are discussed.

MATERIALS AND METHODS

The patients in this study consisted of in-patients (89%), out-patients, and employees referred through the employee health service at Memorial Hospital.

Fecal specimens were cultured for Salmonella and Shigella by standard methods[4] using Blood/MacConkey agar, HE agar, and GN broth. To culture for *C. jejuni*, a Campy blood agar plate and Campy thio (Remel, Lexana, Ka.) were inoculated. The Campy plate was incubated for 72 hours at 42°C in a plastic bag inflated with a gas mixture consisting of 85% N_2, 10% CO_2, and 5% O_2. The Campy thio was refrigerated at 2-8°C overnite, then subcultured to a Campy plate which was incubated for 48 hours at 42°C in the atmosphere described above.

When *Yersinia* cultures were requested, a tube of normal saline was inoculated with feces and refrigerated at 2-8° C for 3 weeks.[5] The saline was then subcultured to a MacConkey plate which was incubated at room temperature for three days.

Colonies resembling *Shigella*, *Salmonella*, or *Yersinia* were identified biochemically using API 20-E strips (Analytab Products Incorporated, Plainview, N.Y.). *Salmonella* and *Shigella* isolates were confirmed serologically. Campy plates were examined daily and characteristic colonies were Gram stained. Small, curved or spiral gram-negative rods which were oxidase and catalase positive were presumptively identified as *Campylobacter species*. Those organisms that did not grow aerobically at 42°C, were sensitive to a 30 μg nalidixic acid disc, but resistant to a 30 μg cephalothin disc, and did not produce H_2S in TSI media were confirmed as *Campylobacter jejuni*.[6]

RESULTS

Campylobacter jejuni was isolated from 9 of 205 patients cultured, for an isolation rate of 4.4% (Table 1). *Salmonella* was isolated from 3.4% and *Shigella* from 4.9% of the patients. None of the patients had a multiple infection with bacterial pathogens. Nine of 10 cases of *Shigella* resulted from a single outbreak at a local military base. During the two years prior to this study, *Shigella* was isolated from only 2 patients. *Yersinia entercolitica* was isolated from 1 patient after 3 weeks of cold enrichment. *Yersinia* cultures (by cold enrichment) were not done on all patients in this study and therefore an isolation rate was not calculated.

Patients with campylobacter gastroenteritis ranged in age from 6 months to 76 years (Table 2). Six of the nine patients were from 20-30 years of age.

TABLE 1
Percent Isolation of Bacterial Pathogens from Feces (205 Patients)

ORGANISM	NUMBER OF ISOLATES	PERCENT OF PATIENTS
Salmonella	7	3.4
Shigella[1]	10	4.9
Campylobacter	9	4.4
Yersinia[2]	1	—

[1]Nine cases associated with a single outbreak.
[2]Yersinia cultures were not done on all 205 patients.

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Campylobacter isolates were scattered throughout the calendar year, with a cluster of isolates seen in May and June.

The initial clinical presentation of most of the cases was that of acute gastroenteritis. Common symptoms included profuse diarrhea, fever, and abdominal cramping. Nausea and vomiting were unusual complaints. Occult blood was present in the three fecal specimens tested.

Case 3 presented with atrial fibrilation. This was thought to be secondary to volume depletion contributed to by the campylobacter gastroenteritis.

Case 4 was initially hospitalized for evaluation of rectal bleeding. No abnormalities were found, although a stool culture was not done. The patient returned in one month with rectal bleeding, profuse diarrhea and fever, at which time his proctoscopic examination and colon biopsy were found to be consistent with Crohn's disease. *C. jejuni* was subsequently isolated from the patient's stool.

The initial episode of gastroenteritis resolved after a few days in 6 cases (67%). Diarrhea continued on a recurrent basis for several months in 2 patients (22%). This information was collected retrospectively, and recurrence was identified by symptoms rather than bacteriologically. Patient 1 expired 3 weeks after onset. This patient had an exploratory laparotomy performed with a total colectomy. The colon had numerous perforations, the mucosa was almost totally destroyed, and a pseudomembrane was present. The cause of death was attributed to renal insufficiency.

DISCUSSION

C. jejuni was isolated from 4.4% of the patients cultured during a 12 month period. Although the number of isolates is statistically small, the isolation rate is comparable to published reports. *C. jejuni* was isolated at a rate of 3.2% at the Mayo Clinic,[7] 5.1% at Denver,[8] and 4.9% in a recently completed multicenter study done in the United States.[9]

TABLE 2
Summary of Campylobacter Cases

CASE	AGE	DATE CULTURED	INITIAL PRESENTATION	OUTCOME[1]
1	76	Nov.	gastroenteritis	expired
2	27	Jan.	gastroenteritis	resolved[2]
3	66	Feb.	fibrilation[3]	resolved
4	20	May	Crohn's	resolved
5	6 mo.	May	gastroenteritis	recurrent diarrhea
6	24	June	gastroenteritis	resolved
7	29	June	gastroenteritis	recurrent diarrhea
8	30	June	gastroenteritis	resolved
9	26	July	gastroenteritis	resolved

[1]All patients were treated with erythromycin.
[2]Initial episode of gastroenteritis resolved and did not recur.
[3]Atrial fibrilation secondary to volume depletion from gastroenteritis.

It is important to note that the isolation rate for *Shigella* (4.9%) was inflated by the single outbreak (9 cases). *C. jejuni* and *Salmonella* were responsible for most cases of bacterial gastroenteritis seen at our hospital, with *Shigella* and *Yersinia* being seen less frequently.

In our study the incidence of *C. jejuni* was somewhat seasonal. *C. jejuni* has been reported more frequently during the summer months in some studies,[7] although a multicenter study in the U. S. failed to show a seasonal peak in cases.[9]

The clinical course in campylobacter gastroenteritis is quite varied. Most cases are relatively mild with symptoms usually resolving within 1-2 weeks with supportive therapy.[3,10,11] However, symptoms have been reported to recur in about 20% of untreated cases.[10] Symptoms recurred in 2 of our 9 cases, (22%), although both received erythromycin therapy. The reason for these recurrences is unknown, although continuation of symptoms after antibiotic therapy has been reported.[11]

Campylobacter gastroenteritis has been reported to mimic inflammatory bowel disease. Of 19 patients with *C. jejuni* seen at the Mayo Clinic who had proctoscopic examinations, 3 were incorrectly diagnosed as having chronic ulcerative colitis and 1 as having Crohn's Disease based on the proctoscopic examination alone.[7]

One of the patients in our study had a proctoscopic examination and colon biopsy consistent with Crohn's Disease. After *C. jejuni* was isolated, the patient was treated with erythromycin and remained free of symptoms after 6 months.

Reports of death due to to Campylobacter are rare, and are usually associated with debilitated or elderly patients.[12] The fatality described in this report is a 76 year old female in apparent good health until developing gastroenteritis 5 days prior to admission. The damage to her colon was rapid and devastating, with death occurring within 3 weeks after onset of the disease.

There is no consensus recommendation as to which patients with *C. jejuni* should be treated with antibiotics. Blaser et al.[13] recommend antibiotics when symptoms have been prolonged, when diarrhea is frequent or bloody, or when

high fever is present. Drake et al.[7] suggested treatment of all proven cases in an attempt to prevent relapses and other complications.

All of the patients in this study were treated with erythromycin, the antibiotic most frequently recommended for the treatment of campylobacter enteritis.[3,13] Erythromycin clears the stool of susceptible *C. jejuni* within 48 hours. Without antibiotic therapy, the organisms are frequently excreted in the stool for weeks after symptoms subside.[11] However, up to 10% resistance to erythromycin has been reported in some studies.[14,15] Unfortunately, standardized susceptibility tests for *C. jejuni* are not available in most hospitals. Tetracycline, chloramphenicol, and gentamycin are other antibiotics that are effective in treating *C. jejuni*.[15] Penicillin G and the cephalosporins are ineffective against *C. jejuni*, and results with ampicillin are variable.[7,15]

In summary, we have isolated *C. jejuni* from a significant number of patients with gastroenteritis at Memorial Hospital. Although most cases were clinically unremarkable, recurrent diarrhea was seen in 2 cases and 1 fatality occurred. Physicians should be aware that *C. jejuni* is a major cause of gastroenteritis and laboratories throughout the state should routinely culture for this organism.

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The Management of Insulin-Dependent Diabetes in Pregnancy

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The management of diabetes in pregnancy has changed dramatically in the last decade. Prior to the discovery of insulin in 1921, the few diabetics that did conceive had a maternal mortality that ranged from 6 to 45 percent, and had a fetal mortality rate near 44 percent.[14] Maternal mortality dropped drastically to near non-diabetic mortality after insulin therapy became routine for pregnant diabetics but infant mortality was still 5 to 10 times that of non-diabetic population 50 years after the institution of insulin therapy.[6] In the past 10 years this infant mortality has markedly decreased and presently infant mortality of diabetic pregnancies is near 2-4 percent.[15] This dramatic change in infant mortality has been achieved with tighter blood sugar control. Thus, Karlsson and Kjellmer[15] found in their series of 179 pregnant diabetics that perinatal mortality decreased from 23.6 percent in the group of 38 patients with blood sugars above 150 mg/dl to 15.3 percent in those patients ($n = 77$) with mean blood sugars between 100-150 mg/dl. In the group ($n = 52$) that maintained their mean blood sugars below 100 mg/dl the perinatal mortality decreased to 3.8 percent.

Thus, the major change in the management of the insulin dependent pregnant diabetic has been from maintaining a "reasonable blood sugar control" which entailed blood sugars in 150 mg/dl range to much tighter, physiologic control (blood sugars under 100 mg/dl).

A recent 37-year-old insulin-dependent diabetic patient in her first pregnancy illustrates the happy outcome of such management.

Case Report

P. H. was a 37-year gravida 1, para 0, black female who was admitted to the University of Arkansas for Medical Sciences (UAMS) during her 30th week of pregnancy because of a symptomatic hypoglycemic episode with a documented blood glucose of 35 at another hospital. She had been an insulin requiring diabetic since the age of 7. When admitted to UAMS the patient was taking 45 units of NPH and 5 units of Regular insulin in the a.m., and 5 units of Regular in the evening. This insulin dosage had not been changed in the 5 years prior to admission, with all of her urines at home being negative for glucose and negative for ketones. She had been following a 2,000 calorie American Diabetes Association (ADA) diet at home.

Past medical history was significant in that the patient had grade II Kimmelstiel-Wilson diabetic retinopathy and normal appearing renal function with a creatinine clearance of 147 ml/min. There was no history of nausea, vomiting, fever or chills in the month prior to admission. She had gained only 3½ lbs. in the 7½ months of her pregnancy. Family history revealed that only one aunt had diabetes and that the patient's mother died of "stomach cancer."

Physical exam on admission revealed an alert, oriented female in no acute distress who weighed 61 kg (134½ lbs.) on a 167 cm (5′ 6″) frame. Vital signs were a temperature of 37° C (98.5° F), pulse 90, respiration 18, and blood pressure of 130/72. On cardiac exam a grade I/VI systolic ejection murmur at the left sternal border was noted. Abdominal exam revealed a non-tender abdomen with uterine fundal height of 28 cm consistent with an intrauterine pregnancy of 30 weeks, and fetal heart tones at 136/min in left lower quadrant. The rest of the physical exam was unremarkable with no sensory loss on neurological exam and no peripheral edema present.

Hospital Course

Soon after admission it was determined that the patient's urine glucose measurements would not be helpful in determining her diabetic control in that when her urine was negative for glucose her blood sugar would vary from 18 to 189 mg/dl and a 4+ urine glucose had a simultaneous blood glucose as low as 189 mg/dl. On her outpatient insulin regimen the patient was having insulin-induced hypoglycemia (blood glucose 18 mg/dl) with rebound insulin-resistant hyperglycemia following these reactions (Somogyi phenomenon).[27,30] To achieve the goal of controlling her blood sugar under 100 mg/dl throughout the day without hypoglycemic episodes the patient was changed from her NPH insulin to a regimen of

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Regular insulin 4 times day (before each meal and before an evening snack). Her final insulin dosage that enabled her to achieve the above sugar goal was 14 units of Regular in the a.m., 6 units at noon, 8 units before supper, and 4 units before a bedtime snack. This dosage was arrived at by choosing initial Regular insulin doses of 8, 8, 8 and 4, and adjusting her insulin by 2 units at a time depending on her blood glucose responses to the insulin doses that she was given. The patient was on a 2,200 calorie ADA diet during her hospitalization while the above adjustments in her insulin regimen were done. At 35 weeks, the patient had a lecithin/sphingomyelin ratio of 5, non-stressed fetal heart monitoring (NST) was non-reactive, and her subsequent oxytocin challenge test (OCT) was negative. Pelvic exam at this time demonstrated the cervix to be closed and uninducible. The patient was felt to be deliverable by Cesarean section, which was performed. A 1930 gram female infant was delivered by total breech extraction. The Apgars were 7/9. Postoperatively both the mother and child did well, with the mother being discharged on 30 units of NPH insulin with fasting blood sugars in the 140-150 mg/dl range. The infant had no evidence of either hyper- or hypoglycemia, either in the hospital or at follow-up visits.

DISCUSSION

The management of a pregnant insulin-dependent diabetic is different than the management of the non-pregnant insulin-dependent diabetic because pregnancy itself causes a significant lowering of fasting plasma glucose and this has to be taken into consideration when managing a pregnant patient who happens to be diabetic. Thus, a non-diabetic pregnant patient has mean fasting glucoses of 73 ± 9 mg/dl in early pregnancy which progressively decrease to mean blood glucoses of 65 ± 9 mg/dl near term.[21] Diurnal plasma glucose values rarely exceed 100 mg/dl except for slight increase in the first hour postprandially. The actual values for non-diabetic women's mean diurnal plasma glucoses are 82 ± 5 mg/dl in early pregnancy and 85 ± 5 mg/dl in late pregnancy.[11] The maximal level postprandially to which plasma glucose increases in early pregnancy is 107 ± 10 mg/dl in non-diabetic patients while in late pregnancy the level is 114 ± 8 mg/dl.[11] The goal, therefore, in the diabetic pregnant patient is to control the plasma glucose near these mean normal levels of non-diabetic pregnant patients.

The threats to the pregnant mother with diabetes are mainly those of an increased incidence of 1) ketoacidosis, 2) pre-eclampsia, 3) infections and, in certain cases, 4) progression of retinopathy. In determining the optimal course of patient care, it is essential that the risk encountered by the pregnant diabetic be considered. Although there have been many classifications of diabetic pregnancies, the most widely applied risk assessment system is that of Dr. Priscilla White[33] which is as follows:

Class A — Non-insulin requiring hyperglycemia which is present only during pregnancy, i.e., gestational diabetes.

Class B-R — Are all insulin requiring and have the following characteristics:

Class B — Onset of diabetes after age 20 with a duration of disease of less than 10 years.

Class C — Onset between age 10-19 or duration of disease of 10-19 years.

Class D — Onset of diabetes before age 10 or a duration of greater than 20 years; benign retinopathy is part of Class D but not part of Class A-C.

Class F — Any age of onset or duration with the complication of nephropathy.

Class H — Any age of onset or duration with the complication of heart disease.

Class R — Any age of onset or duration with the complication of proliferative retinopathy.

The present patient was Class D diabetic with the increased risk to a successful outcome of the pregnancy in that she was 37 years old with her first pregnancy. As mentioned in the Introduction, there has been a dramatic improvement in recent years in fetal survival in diabetic pregnancies. Control of maternal glycemia appears to be the most important controlable factor influencing fetal outcome.[1,10,13,15,21] Fetal glucose levels are a direct function of maternal glucose levels since glucose is transported across the placenta to the fetus by facilitated diffusion.[3] Insulin does not cross the placenta. Thus, when the pregnant diabetic mother's diabetes is not well regulated, maternal hyperglycemia leads to fetal hyperglycemia. As a consequence, the fetal pancreas is stimulated resulting in β-cell hyperplasia and fetal hyperinsulinemia.[20] Fetal hyperinsulinemia is thought to contribute to the mortality and morbidity of these neonates as it in-

hibits the pulmonary maturation processes required for surfacant production leading to respiratory distress syndrome.[26] When removed from the constantly delivered maternal glucose, the fetus with hyperinsulinemia is also at increased risk for developing neonatal hypoglycemia.[19,22]

The present patient had hypoglycemia which precipitated her admission to UAMS. Hypoglycemia is often encountered in diabetics in the first trimester of pregnancy, as estrogen increases the sensitivity of adipose tissue and skeletal muscle to insulin. Thus, these diabetic patients often have decreased insulin requirements in the first trimester of pregnancy. Likewise, after delivery and removal of the placenta the contra-insulin effects of human placental lactogen are terminated and hypoglycemia may again result in these patients. The present patient's exact level of control in her first trimester are unknown in that her control was based only on her urine glucose values which were "negative." In the hospital her negative urine glucose values covered a wide range of simultaneous blood sugars from 18 to 189 mg/dl.

In the second trimester of pregnancy, the requirement for insulin is usually twice that of the same patient in a non-pregnant state with similar chemical and clinical findings. In this trimester there is increased susceptibility to ketoacidosis with blood sugars in only the 200-300 mg/dl range. Ketoacidosis causes increased fetal wastage. This increased fetal mortality is thought to be due to lowering of 2, 3-diphosphoglycerate levels leading to fetal anoxia and intrauterine death.[8]

The last trimester of pregnancy is characterized by increased needs for insulin and the lowering of the renal threshold for glucose. Since glomerular filtration increases progressively throughout pregnancy, glycosuria occurs at lower plasma glucose levels than the normal mean renal threshold for glucose of 170-180 mg/dl.

The most effective approach to good diabetic control during pregnancy is to administer insulin in multiple daily doses. This may be divided into 4 doses of Regular insulin as was done in this patient's case (which is the most physiologic way of managing the diabetes) or may be a combination of intermediate acting insulin such as NPH or Lente insulin plus Regular (short-acting) insulin, which works well for the outpatient management of the majority of pregnant diabetics. When utilizing an intermediate acting insulin in pregnancy the daily dose is usually divided to give 2/3 to 3/4 before breakfast and the remainder before supper. When Regular insulin is given with the intermediate insulin usually up to 1/3 of the total morning insulin dose as Regular insulin and 1/8 to 1/3 of the total evening dose is given as Regular insulin. Regular insulin is usually only added to the intermediate insulin regimen if the patient is having noontime hyperglycemia (which before breakfast Regular insulin would help control) or suppertime hyperglycemia, which the before supper Regular insulin should help bring under control. The definition of hyperglycemia in the pregnant diabetic with respect to the above insulin dosage would be any plasma glucose above 100 mg/dl. Management of the pregnant diabetic is also one of the indications for a portable, continuous infusion insulin pump. These pumps are expensive, however, costing $1,000 - $2,000 for the various models presently available.

The diet throughout pregnancy for the pregnant diabetic should be 2000-2200 calories using 30-35 Kcal/Kg of ideal body weight to arrive at the total number of calories for each individual diabetic patient. This intake is usually determined for each meal by the "rule of sevenths": 1/7 for breakfast; 2/7, lunch, 3/7, supper; and 1/7 bedtime snack. Using 2/7 for breakfast, and the 2/7 for supper is a very acceptable modification of this "rule" for patients who prefer a larger breakfast.

Managing the pregnant diabetic at home requires careful blood glucose monitoring with blood sugars at least twice weekly in the physician's office or preferably daily at first at home by the patient herself. Blood glucose monitoring with a Glucometer® or Eyetone® is now widely utilized in the treatment of pregnant diabetics and is reportedly preferred to urine testing by more than 90 percent of the patients.[28] Once the correct insulin requirements are determined in early pregnancy utilizing the above blood sugars, then twice weekly blood glucoses before breakfast, lunch, supper and bedtime snack are very helpful in adjusting the insulin dosage through the remainder of the pregnancy to maintain the blood sugar under 100 mg/dl throughout the day. Hemoglobin A_{1c} levels have been suggested as a means of following glucose control of diabetic patients who are pregnant.[23] Hemoglobin A_{1c} levels reflect the average blood glucose levels in the preceding 1-2 months. Thus, they are not useful in the day-to-day adjustments of the patient's insulin dosage and are currently not recom-

mended for the management of the pregnant diabetic.[23]

In determining healthy fetal growth during the latter part of the diabetic pregnancy, monthly serial ultrasonography is utilized to estimate fetal size and maturity, with the biparietal diameter of the fetal skull now being measured with great accuracy starting in the second trimester. Fetal placental function can be monitored by 24 hour urinary estriol/creatinine ratios starting in the 30 to 32nd week with twice or thrice weekly determinations done to establish a baseline.[8] Daily determinations are begun around the 37th week of gestation. To be helpful in determining when to deliver the fetus, these determinations need a rapid turnaround time from the laboratory. If it takes several days or more to get the results of these tests, it is better to utilize the other methods described below for timing delivery in these patients.

Non-stressed fetal heart sound (NST) monitoring is another means of assessing intrauterine wellbeing. In this noninvasive test a pattern is considered reactive if the baseline heart is between 120-150 beats per minute, the baseline variability is 10 beats per minute or more, and at least 5 fetal movements accompanied by accelerations of 15 beats per minute or more occur during a period of 20 minutes. A suspicious NST needs to be confirmed with an oxytocin challenge test (OCT). The OCT test utilizes external fetal monitoring equipment to measure the response of the fetal heart rate to the periodic hypoxic stress of oxytocin induced uterine contractions.[9] A negative OCT — a test with no late decelerations — is excellent evidence of intrauterine fetal wellbeing. A positive OCT — a test with repetitive late decelerations — is considered quite ominous.

The best test of fetal maturity at present appears to be measuring the concentrations of the phospholipids lecithin (L) and sphingomyelin (S) in amniotic fluid. The ratio of these two phospholipids is about 1:1 before the 35th week of pregnancy.[12] After that time the lecithin concentration rises rapidly until term, whereas the sphingomyelin concentration decreases.[12] Thus, in the nondiabetic patient, if the L/S ratio is 2:1, the lung is usually mature despite fetal size and there is little likelihood that serious respiratory distress will develop. One cannot, however, always rely on a 2:1 ratio meaning fetal lung maturity in the infant of a diabetic mother.[4,5] Lowensohn and Gabbe[17] have reported that in Los Angeles County-Women's Hospital the incidence of respiratory distress syndrome (RDS) is 5.4 percent. In their patients with RDS, 15 percent had L/S ratios between 2 and 2.49; 3.7 percent had L/S ratios between 2.5 and 2.99, and 6.7 percent had ratios between 3.0 and 3.5.[17] None of the patients with RDS had an L/S ratio above 3.5.[17] A L/S ratio of 2.5 and above (and certainly above 3.5) would thus appear to be a more prudent guideline for fetal maturity than a L/S ratio of 2.0, when dealing with a high risk patient such as the pregnant diabetic where the risk of RDS is increased 5.6 times over that of nondiabetic pregnancies.[25] A final marker of fetal pulmonary maturation is the production of the acid phospholipid phosphatidylglycerol[16] which can be used when the above tests give equivocal results. Elective delivery may be accomplished either by induction of labor or Cesarean section. The latter is selected when antepartum testing suggests fetal jeopardy. The insulin-dependent diabetic woman who is having her first baby at the age of 35 or more is also one of the few indications for an elective Cesarean section. Other indications for an elective Cesarean section are severe preeclampsia, previous Cesarean section, and malpresentation or disproportions of the fetus of the diabetic mother.

During delivery, maternal glucose levels must be carefully regulated to prevent neonatal hypoglycemia. There is no general agreement concerning the type of insulin or route of administration during delivery. Because of the potential problem of protracted hypoglycemia when too large a dose of intermediate acting insulin is given, some would prefer to use only Regular (short-acting) insulin during delivery utilizing the mother's blood sugars as a guide to therapy.[18,24] Patients who were on intermediate acting insulin prior to delivery, however, seem to do well with decreasing their insulin dose during delivery to 1/3 or 1/2 of their usual daily dose while at the same time infusing glucose or dextrose as recommended by Felig.[7] Felig also suggests giving 2/3 of their prepregnancy dose on the day following delivery.[7] While in labor, euglycemia may also be obtained with continuous insulin-glucose infusions. This method is now preferred by many persons taking care of these patients.[2,29,32,34] West and Lowy[32] suggest infusion rates of 1-2 IU/hr and 1000 ml of 5 percent glucose infused over 6 hours. This is a good method for glucose control during delivery but

does entail close glucose monitoring as in the above methods to prevent hypoglycemia. The above principles of management of the insulin-requiring diabetic patient during her pregnancy and at delivery has drastically reduced fetal as well as maternal mortality in these patients. Some groups have even reported zero fetal mortality rate in insulin-dependent diabetics utilizing these guidelines.[1]

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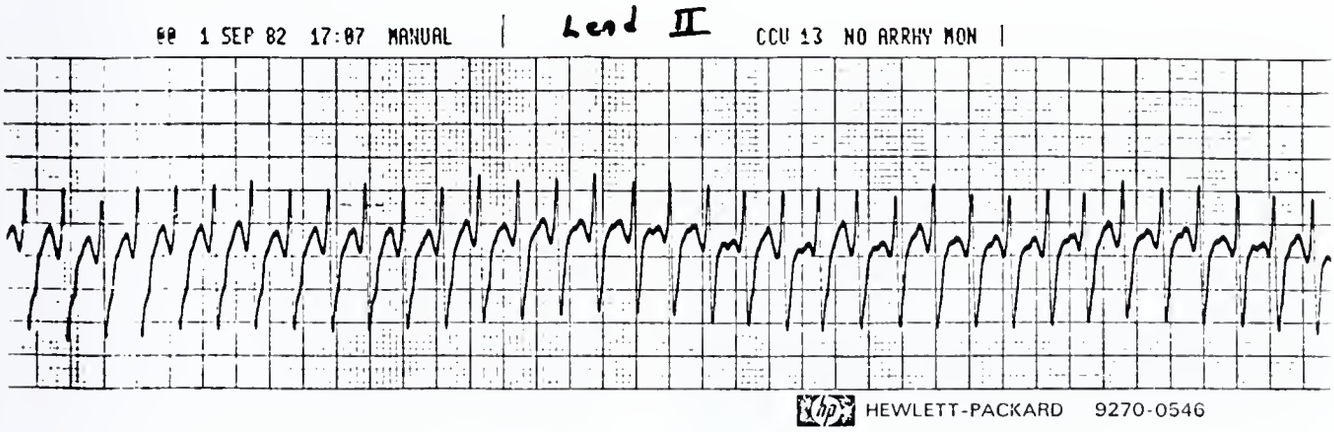
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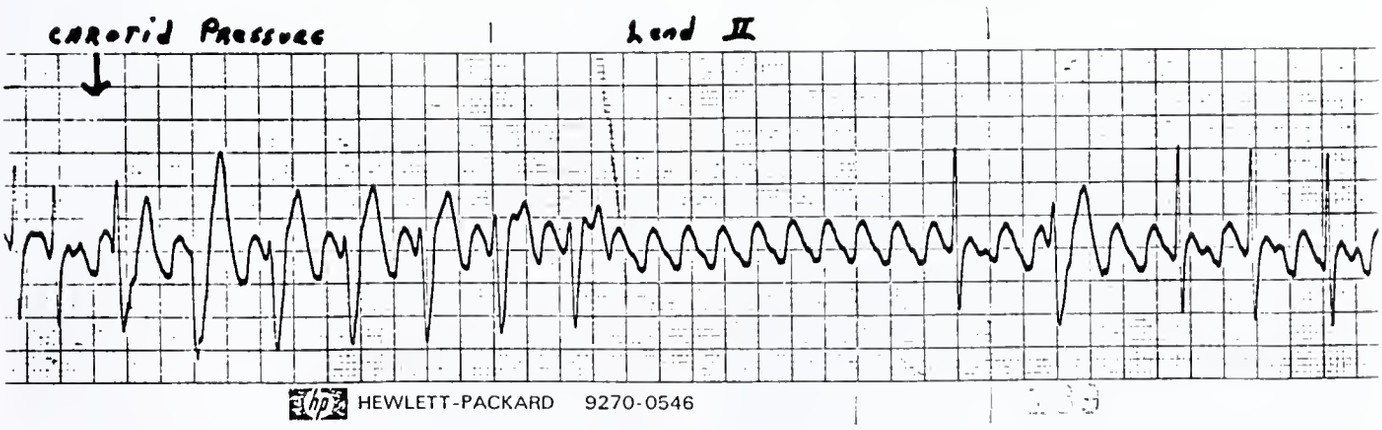
ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 207)

H. J. is a 31-year-old woman who presented to University Hospital after undergoing cardiopulmonary resuscitation. The patient was able to give a long and complex history of rhythm disturbances including episodes of both tachycardia and bradycardia. Her physical examination was normal. A twelve-lead electrocardiogram done on admission showed paroxysmal reentrant tachycardia, a reading confirmed by HIS bundle studies. Reproduced below is a monitor strip obtained after an abrupt increase in heart rate was observed. Carotid pressure was applied at the point indicated. What would you call this arrthythmia?





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Office Orthopaedics

Runners' Injuries About the Knee

Richard A. Nix, M.D.*

When Frank Shorter won the Olympic Marathon in Munich in 1972, the groundwork was laid for a revolution in the American lifestyle. As the first American to win the gold medal for the marathon in sixty-four years, he showed that Americans could compete favorably at distance running — a sport previously dominated by Africans and Asians. The massive media coverage was followed shortly by numerous books on the physiology and psychology of recreational running (Drs. Fixx, Ullyot, Sheehan, etc.). Newer concepts that running could be fun as well as healthful, led to the popularization of long, slow distance (LSD) training. Self-coaching probably has helped to avoid the "burn-out" phenomenon that halted many good high school and collegiate athletes in the past.

Figures vary, but shoes sales alone confirm that millions of Americans are running. Unfortunately, few of these people are so anatomically sound as Frank Shorter or Alberto Salazar. Alignment problems, degenerative joints and conditioning problems have become symptomatic as this previously "healthy" population began endurance training. A rather large section of the population has become a rather large section in the waiting room of many family practitioners and orthopaedists.

Running-related injuries understandably predominate in the spine, pelvis, and lower extremity. A plethora of problems in and near the knee have been noted. Some of these are particular to distance running; others may occur in many sports. A discussion of the knee in running, along with numerous problems in this anatomical area (their diagnosis and treatment) will hopefully be of assistance in managing these patients.

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THE KNEE IN RUNNING

References to the "knee joint" usually mean both the femorotibial and patellofemoral joints. These function simultaneously as a unit, but must be considered separately during clinical evaluation. The obvious function of the knee is its hinge mechanism, but a very significant amount of rotation occurs also. Normal range of motion generally includes flexion of 140° and extension to 5° of recurvatom (hyperextension). Rotation between the femur and tibia occurs up to 20° but is difficult to measure clinically. The flexion and extension moments at the knee are generated by the obvious opposing muscle groups — the quadriceps and hamstrings. During active flexion, the rotation of the knee is balanced in near neutral: the internal rotation forces of the sartarious, gracilis, semitendinosus, semimembranosus and popliteus are opposed by the external rotation forces of the iliotibial band and biceps femoris. There is, however, a passive force of rotation transmitted from the foot (Figure 1). This occurs in impact-loading sports such as running and varies greatly depending on the configuration of the foot. This will be further discussed under specific injuries.

Examination of the runner's knee must be approached quite differently than, for instance, a quarterback's knee that has sustained direct trauma. Most runners' problems about the knee are a function of chronic stress and overuse. In impact loading sports where indirect trauma is a causative factor, the knee must be viewed as a link

in a biomechanical chain consisting of the foot, ankle, knee, hip, pelvis, and spine. Proximal imbalances such as scoliosis must be checked. A standing inspection for levelness of the iliac crest can identify a leg length descrepancy. If found, further exam is needed for localization (i.e., pelvis, femur, tibia or calcaneus). Gait should be inspected for rotational or alignment deformities which might not be apparent on the examining table. Hip rotation should be tested on the exam table. A standing inspection of knee alignment (varus and valgus) is necessary also. As mentioned earlier, heel varus and valgus along with pes planus and pes cavus have an important effect on knee mechanics — these should be inspected (Figure 2). Inspection of well-worn running shoes may make subtle imbalances very apparent (Figure 3). New shoes understandably offer few clues.

A systematic examination of the knee is quite easy. A simple mnemonic avoids oversights: STREP (Stability, Tenderness, Range of Motion, Effusion and Popping [McMurray's test]). Collateral and cruciate ligament stability should be checked; more sophisticated tests for rotational stability are occasionally indicated. These are rarely problems in runners suffering from indirect trauma. Tenderness must be exactly located (i.e., joint line, patellar tendon, pes anserinus, lateral patellar facet, etc.). Subtle knee effusions are better detected by two-handed ballottement. Any palpable effusion is abnormal; just like fever, it is an objective physical finding suggesting underlying pathology — not a diagnosis in itself.

Chondromalacia. Certainly no discussion of athletic problems about the knee would be complete without considering this ubiquitous problem. Symptoms are related to the patellofemoral joint. The underlying pathology is softening, fibrillation and even fragmentation of the articular cartilage of the patella and even the intercondylar groove of the femur. Patients often complain of retropatellar pain, crepitus and, occasionally, a joint effusion. These are aggravated by hill running (especially downhill) and interval speed workouts. Downhill running requires violent quadriceps contractions against an

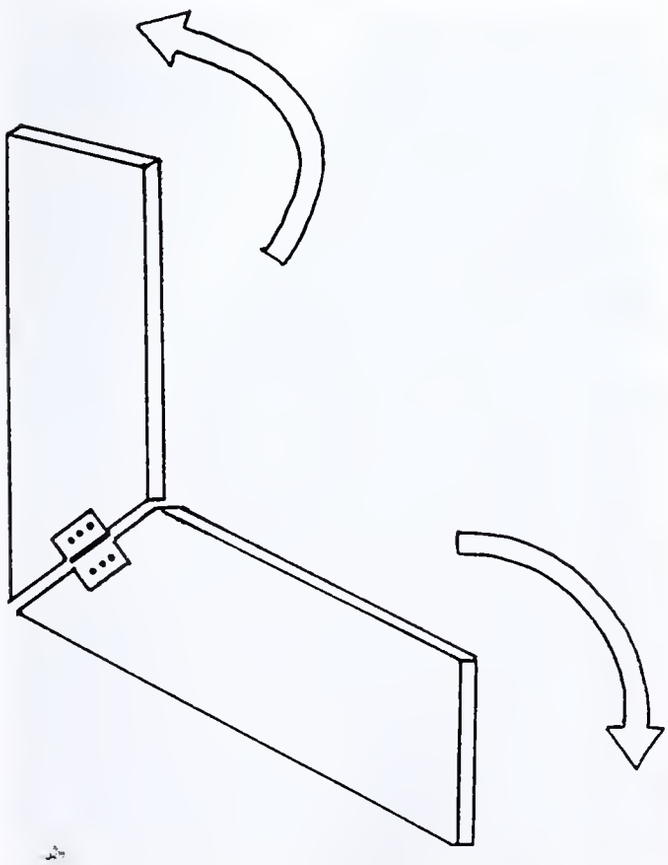


Figure 1. The "mitered hinge" effect demonstrates how pronation and supination of the foot transmit rotational forces to the knee via the subtalar joint (the hinge).



Figure 2. Static foot and ankle deformities transmit abnormal forces to the knee.



Figure 3. Well-worn shoes make subtle imbalances very apparent. (Same feet as figure 2)

already compromised patellofemoral joint. As the velocity of running increases (e.g., interval training) knee flexion increases to over 90° and impact loading increases up to three to five times body weights. Both of these factors increase the forces across the patellofemoral joint. Many times anatomic problems are found which produce abnormal stresses on the patellofemoral joint thereby predisposing a runner to chondromalacia. Lateral insertion of the patellar tendon (increased Q angle), external tibial torsion, excessive femoral anteversion and lateral subluxation of the patella have all been implicated.

The mainstay of treatment in chondromalacia patella remains quadriceps rehabilitation. This is done with quad sets, straight leg raising and short arc quads (0°-30° extension against weights). Squats and deep knee bends are strictly avoided. The vastus medialis component of the quadriceps responds well to this therapy and improves tracking of the patella. Running habits must be temporarily modified to avoid hill training and interval workouts. Aspirin therapy can minimize pain and actually help expedite cartilage regeneration. Substitution training, such as swimming, is well advised for aerobic conditioning and muscle toning. Cycling has these advantages, but requires acute knee flexion which is poorly tolerated with this injury. In certain refractory cases shaving of the fibrillated cartilage has proven beneficial. This is done arthroscopically with a mechanical shaving device.

Meniscal lesions. This problem is not isolated to runners, but is very limiting when it occurs. The mechanism is usually a sudden flexion-rotation movement, as in a fall or violently arising from a squatting position. The original injury often seems mild until persistant symptoms occur. Patients complain of recurrent popping and locking of the knee (often a very audible "clunk"). Tenderness exactly along the medial or lateral joint line along with a recurrent joint effusion strongly suggest the diagnosis. McMurray's test is frequently positive — the loud "clunk" should be differentiated from softer "clicks" occurring in the patellofemoral joint. An early, lesser meniscal tear may progress in size and identify itself by increased symptoms. This is a mechanical problem within the joint that a runner cannot ignore. The interposed meniscal fragment has a deleterious effect on joint mechanics and cartilage nutrition. Frequently, excision of the torn fragment restores the joint to normal function. This can frequently be done through an



Figure 4. Key points of topographic anatomy (see text).

arthroscope to minimize hospitalization, postoperative pain and rehabilitation time. Running can be resumed as soon as muscle rehabilitation is accomplished.

Iliotibial band friction syndrome. A distressingly common cause of lateral knee pain in distance runners is the iliotibial band (friction) syndrome. This is an overuse tendinitis particular to this sport. Usually patients note the gradual development and worsening of lateral knee pain above the joint line during a workout. Symptoms often worsen to preclude any running. Symptoms may predominate if a runner has a short leg or consistently runs in the same direction on a slanted surface. Relief is usually sought by ambulation with a stiff knee gait. Physical findings are characteristic with point tenderness over the lateral epicondyle — this is clearly above the lateral joint line. Often, crepitus is detectable with flexion and extension of the knee. A fullness or local swelling is often noted. X-rays are usually unnecessary to confirm the diagnosis

The iliotibial band tightens firmly at foot strike to stabilize the pelvis and knee. During terminal extension (approximately 30°) the iliotibial band passes anterior to the lateral epicondyle. The repetitive trauma of running produces a frank tendinitis. Reduction of distance training is obviously important. Ice and deep massage to the area immediately after workouts are felt to be helpful. Oral anti-inflammatory agents and local heat are also recommended. Occasionally, a steroid injection locally deep to the iliotibial band may be required. World class runners treat this injury cautiously, because, when ignored, it can easily persist for six months. Surgical release of the iliotibial band distally has been undertaken with various techniques and with varying results. Sectioning of the anterior oblique fibers has been the primary surgical approach in an effort to prevent recurrent subluxation anteriorly and posteriorly over the lateral epicondyle. A posterior release, likewise, has also been described, but only limited data is available on this. Again emphasis must be placed on modification of training techniques. It should also be mentioned that abductor strengthening exercises may also be of benefit in managing these symptoms.

Popliteus tendinitis. Another variation of lateral knee pain almost exclusively seen in runners is that of popliteus tendinitis. This small, but

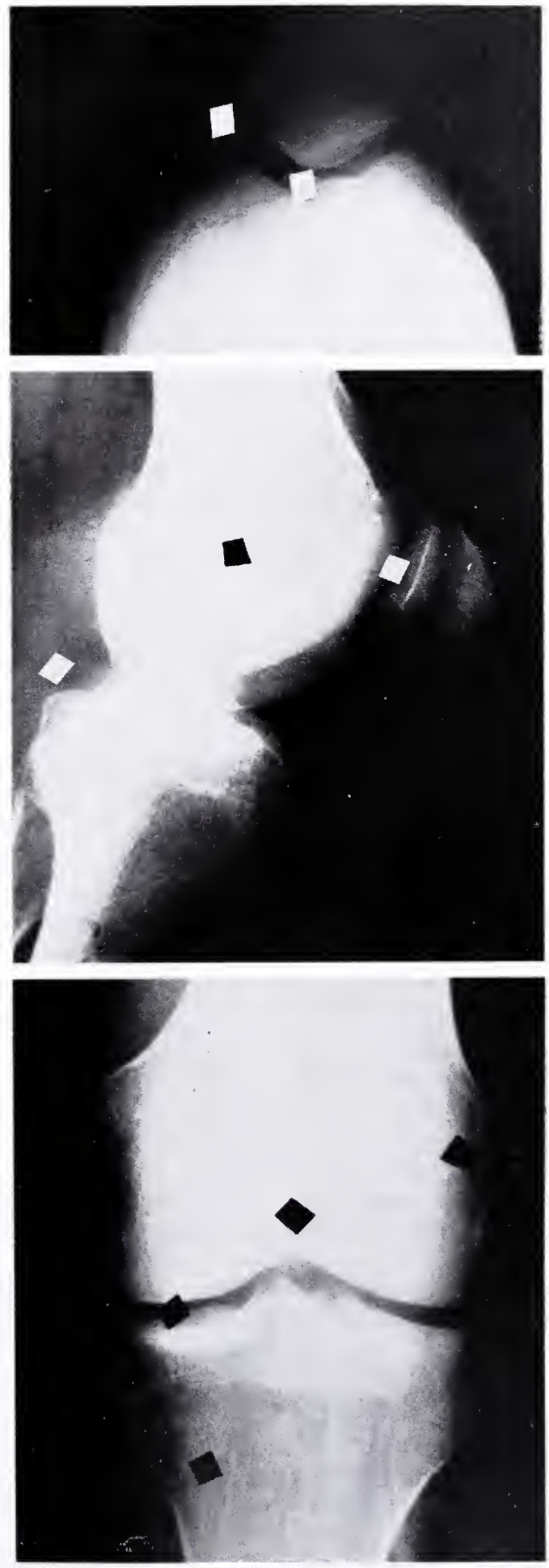


Figure 5. Bony anatomy—key problem areas (see text).

significant muscle has its tendinous origin on the posterior aspect of the lateral femoral condyle. Additionally, it has a tendinous origin from the posterior aspect of the lateral meniscus. The tendon actually passes intra-articularly and can be viewed from within the knee joint arthroscopically at the posterior lateral corner of the lateral compartment. Runners typically complain of a deep aching sensation in the posterior lateral aspect of the knee. As in many overuse syndromes symptoms may develop a few miles into a workout and progressively worsen. Pain is essentially exacerbated on downhill running.

Physical examination reveals point tenderness at the level of the joint line at its posterior lateral aspect. There may be some tenderness anterior to the lateral collateral ligament. There should be no associated evidence of ligament instability or joint effusion. Popping or locking of the knee would suggest meniscal pathology instead. Leach recommends placing the lateral malleolus of the injured leg on the contralateral tibia allowing stress of the popliteus tendon. This should reproduce the pain which the patient senses. Careful palpation shows this to be clearly a different location than in iliotibial band syndrome.

Initial treatment does not usually require cessation of running, but avoidance of all hill training is quite important. Application of ice for fifteen minutes after workout coupled with oral anti-inflammatory agents are often sufficient. Local steroid injections may be required.

Medial retinaculitis. This is a lesser known problem of the supporting structures of the patellofemoral joint. The patellar retinaculum consists of medial and lateral fibers oriented horizontally which tether the patella in its midline position for appropriate tracking. The repetitive stress of distance running probably coupled with subtle anatomic imbalances in the extremity may lead to tenderness over the medial patella retinaculum. Runners complain of pain localized to the medial aspect of the patella rather than deep in the patellofemoral joint. This is not associated with a joint effusion or other intra-articular symptoms. Reduction in mileage and avoidance of the trauma of hillwork are certainly advisable. As with other patellofemoral problems substitution training, especially swimming, may be a good temporary alternative.

Patellar tendinitis. Inflammation of the patellar tendon occurs primarily at the inferior pole of the patella. Most common in basketball players, it is also seen in highjumpers and hurdlers. Its association with jumping sports is clearly known. It does occur in distance running, however, and may be a longstanding problem. Basic principles about the extensor mechanism of the knee hold true here. Downhill running and high velocity running increase stresses along this musculotendinous unit. Symptoms usually surface during these times. Quadriceps stretching, post-exercise icing and anti-inflammatory agents will relieve milder cases. As in Achilles tendinitis, it is a good idea to avoid steroid injections. Intratendinous injections have been shown to weaken the tensile strength of the tissue. Even without injection, spontaneous ruptures of the patellar tendon have been reported following chronic patellar tendinitis. Be advised, however, that certain acute and painful cases may require a one-time injection. Rarely, refractory cases may warrant surgery. Focal degeneration of the ligament is often found and is excised. Resumption of activities must be slow to allow sufficient healing.

Pes anserinus tendinitis and bursitis. This is a painful condition involving the distal tendons of the sartorius, gracilis and semitendinosis tendons. The bursa underlying the pes and overlying the medial collateral ligament may become inflamed and develop an effusion. The history of development of pain is fairly typical as in other types of tendinitis. Intra-articular symptoms should not be present (popping, locking, joint effusion). Careful examination to rule out medial joint line tenderness is imperative. Findings of an effusion in the anserine bursa is helpful. Tenderness extending proximally along the medial hamstring tendons is also helpful. Correction of static foot deformities, a sensible workout schedule, and non-steroidal anti-inflammatory agents usually suffice in alleviating symptoms.

Stress fracture of the tibial plateau. Although rare, this is a particular diagnostic problem because of its proximity to other more common overuse injuries about the knee. Stress fractures commonly present with pain developing well into a long run. This is relieved by rest. The absence of other objective findings of more common diagnoses should arouse one's suspicion. Radiographic changes of a linear sclerosis in the medial tibial plateau are often slow to develop. Local injections for a misdiagnosed bursitis will obviously offer a relief. Radionuclide bone scanning

with pin hole collimator of the suspicious area is diagnostic. Rest is mandatory until symptoms abate. This often requires several weeks followed by an equal period of gradual resumption of training.

Osteoarthritis of the knee. A very common question among runners is what to do with training on an osteoarthritic knee. A great number of runners have had previous ligamentous injuries or meniscectomies which may predispose them to degenerative changes in the joint. There is no data to suggest that years of distance running will prematurely age an otherwise normal knee. Conceivable, just the opposite could prove true. The problem lies in the joint with already identifiable degenerative changes. Is running feasible? How much is too much? Most authorities recommend a cautious approach to training with meticulous attention paid to the development of symptoms. Joint pain and recurrent synovitis are strong indicators of abuse of an abnormal joint. Substitution training of aerobics sports with less impact loading is mandatory. Cycling and swimming are usually advised in this setting.

There are many other injuries about the knee related to running which could not be listed. The injuries noted above include a high percentage of runners' problems which the family practitioner or orthopedist will see, and outline the basic principles of their management. A recurring theme of rest and measures to reduce inflammation is apparent. Perhaps a good "runner's physician" simply knows less abrasive ways to say "quit running." Recreational athletes which comprise the bulk of these patients, are particularly hard to treat. World class runners listen to their symptoms much more attentively than does the weekend athlete. A prolonged injury to a professional can be financially and professionally devastating and they seem aware of this.

Many sports psychologists feel that the running boom is more than a passing fad. Unlike racquet sports and team sports, it has been classified more as a pure sport. Because of this some psychologists feel that its appeal is more basic and more universal. Physician education in the management of runners' injuries will hopefully become an integral part of the medical training of family practitioners and orthopedists in years to come.

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EDITORIAL

Congestive Cardiomyopathy

Alfred Kahn, Jr., M.D.

Cardiomyopathies are often overlooked in clinical practice. A higher index of suspicion and more sophisticated laboratory techniques have delineated this group of diseases. Spodick has reviewed "The Effective Management of Congestive Cardiomyopathy" (Archives of Internal Medicine, Volume 142, page 689, April, 1982). He subdivided the cardiomyopathies into restrictive, hypertrophic, and congestive. Spodick states that congestive cardiomyopathy is relatively common. He divides congestive cardiomyopathies into the following classifications: Idiopathic cardiomyopathy which may be familial or non-familial; ischemic; inflammatory due to infection due to toxic reaction; metabolic due to toxic substance as alcohol or nutritional or endocrine disorders; post-partal; associated with neuromuscular disorder; senile. The importance of recognizing this disorder is that congestive cardiomyopathy has had a mortality rate as high as 40% in one year and 65% in two years in the past.

Congestive cardiomyopathy, according to Spodick, primarily manifests itself as left ventricular failure, but is often associated with signs and symptoms of right ventricular failure. He points out that the earliest sign may be an arrhythmia or just an enlarged heart. The author's experience using conventional treatment of congestive cardiomyopathy has been poor. He states that congestive cardiomyopathy tends to run an early downhill course despite the usual drug injury in heart failure — cardiotonics and diuretics; he attributes this to "disproportionately small hypertrophy in relation to dilatation" and ultimately the contraction function of the heart is injured. The ventricles tend to be large and weakly contracting. Prognosis is said to be better if there is a considerable degree of hypertrophy of the muscle wall instead of just dilatation. Spodick explains myocardial hypertrophy in five different ways: Firstly, there is that type in which there is a total increase in myocytes; secondly, there is that type associated with volume loading (shunts, for example); thirdly, there is pressure loading as in high blood pressure; fourthly, there is an ischemic variety due to regional injury; and, lastly, there is diffuse myocardial damage. In cardiomyopathy, it is said that there is evidence of "loss of contractal elements and relative sarcoplasmic reticulum including defective pyruvate dehydrogenase causing decreased mitochondrial calcium uptake." All of this tends to produce a generalized failure of function. Spodick is emphatic in relating that the usual treatment of congestive failure does not work here; he recommends the following general program: Treat the causative conditions, avoid medicines which might injure the heart, control any arrhythmia, treat heart failure as indicated, and, lastly, use any indicated treatment as anticoagulants, Beta adrenoceptor blockade, etc. The article relates how Beta adrenoceptor blockade was tried on a group of patients with congestive cardiomyopathy plus digitalis and diuretics. They improved. When the Beta adrenoceptor blockade drug was withdrawn, myocardial function was said to have deteriorated rapidly. This good result was obtained even though Beta adrenoceptor blockade agents seem to interfere with the contractibility of the heart. Catecholamines directly injure the myocardium and the Beta adrenoceptor drugs produce this effect; and they also have a favorable effect on the heart by reducing the heart rate and this decreases the amount of fuel required by the heart. The total effect of Beta adrenoceptor blockade work is really unknown at this point.

So-called unloading treating is recommended.

As Spodick points out, the ventricular ejection varies inversely with resistance into the vessels into which the blood is pumped; he further points out that as the myocardial function deteriorates the renin angiotensin aldosterone system and the sympathetic nervous system all tend to produce vasoconstriction; this increases vascular resistance and tends to create a vicious cycle. For this reason, this review recommends so-called unloading agents; they decrease arterial and venous tone, thus lowering the resistance through outflow of blood from the heart and increasing the capacity of the vascular tree. Among the drugs which are recommended are arterial vasodilators as hydralazine and phentolamine; verapamil and nifedipine are also recommended. The nitrates are used because they are venous dilators. Captopril is recommended because it is both an arterial and venous dilator. Some of these results have not been adequately proved by multiple groups of investigators; furthermore, whether this type of treatment will work over a long period of time has not been proved — in other words, they may be decreasing effectiveness, although this is really unknown. Despite Spodick's cautiousness in recommending longterm good results, he does indicate excellent short-term results. It is said that patients with congestive cardiomyopathy have a poor ventricular result to digitalis. Inotropic effect can be obtained with other substances including Dobutamine, Dopamine, Aubuterol, Clonidine, and others.

Total patient care is strongly recommended in addition to cardiac care. Bedrest is an important measure. Prevention of systemic and pulmonary emboli is important. One rather dramatic suggestion is made — namely, cardiac transplantation is recommended when it is possible and all else has failed. Spodick recommends substituting various forms of treatment — if one drug begins to lose its effectiveness other medications can be tried. He urges early diagnosis so that if the patient is exposed to a toxic substance as alcohol the patient can be taken off alcohol before irreparable damage is done.

All in all, this is an extremely interesting and stimulating article on a very common form of cardiac disease.

"From Other Years"*

Journal of the Arkansas Medical Society
Vol. 4 No. 2 August 15, 1893

COUNTY SOCIETIES

The Journal recently saw tabulated all of the known tests of death. From the occurrences of the summer, or, more properly, from the lack of occurrences, in the County Medical Societies of Arkansas, it is believed that these Societies would fail to respond to any known test for life that could be applied.

Even the word "refreshments" written on the notification card of the Little Rock Medical Society failed to bring out more than a few of the members. There are two infallible tests of the life of a local medical society, "refreshments"— "annual election of officers." If these two fail, neither stimulation, electricity, artificial respiration, nor even the orificialist's infallible resuscitator, dilating the sphincter ani, will revive them.

The Journal believes that it is only a rest that the Societies are taking, and that when they do begin work in the autumn it will be with a vim that shall more than make up for the drowsiness of the summer months.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The top strip shows a regular tochycardia with a ventricular rate af 253 per minute. The QRS duratian is abaut 0.12 sec. and P-waves can nat be seen with any degree af certainty. With caratid pressure, the ventricular respanse abruptly decreases to half its farmer rate for seven beats and then we see a series af nine nanconducted P-waves with a P-wave rate af 253/minute. Thus, one cancludes that the broad QRS tachycardia represents atriol flutter with 1:1 canductian. Obviausly, this is a dangeraus arrhythmia.

MEDICINE IN THE NEWS



THE MONTH IN WASHINGTON

President Reagan won a stunning victory with the Congressional passage of a tax-increase, spending-cut bill in late August. The House vote was 226-207; the Senate vote, 52-47.

The bill — Tax Equity and Fiscal Responsibility Act of 1982 — is projected to raise government revenues by $98.3 billion over the next three fiscal years, including $18.3 billion in fiscal year 1983. The legislation also includes spending cuts in medicare (12.8 billion over three years) and Medicaid (1.4 billion over three years).

The support of House Democrats proved essential to the bill's passage; only 103 of the 192 House Republicans voted for the bill. The Senate vote was split largely along party lines with nine Democrats and 43 Republicans supporting the measure.

Numerous earlier provisions of the Senate and the House were not accepted by the Conference committee. One such provision that ended up on the cutting-room floor was a proposal that would have placed a limitation on the annual increase in physicians fees through limits on the Economic Index.

The complex bill evolved from marathon sessions, some lasting until dawn, of a House-Senate conference committee. Few pieces of legislation have stirred more interest and controversy. The ten-day-long conference was attended day-and-night by more interested people than any "old timer" can recall.

American Medical Association lobbyists covered the marathon sessions in relays, "— there was never a minute an AMA representative was not on hand." In addition, senior AMA Chicago and Washington staff were constantly on call to determine the relative emphasis of different Association policies so that the lobbyists on the Hill at all times were clearly informed by "beepers" of AMA policy priorities.

Michael Bromberg, Executive Director of the Federation of American Hospitals, said:

"As always the AMA people were always there, were seen everywhere, did a wonderful job, and came out better than anyone."

Some of the highlights of the bill affecting physicians follow:

Inpatient Radiology and Pathology Services

Medicare reimbursement for inpatient radiology and pathology services will be put on the same basis as Medicare payment for the services of other physicians. Reimbursement will be at 80 percent of the "reasonable" charges, and radiologists and pathologists will no longer be required to accept assignment for all cases.

Provider-Based Physicians

This provision calls for a differentiation between professional medical services furnished in a hospital that are directly furnished to an individual patient and that contribute to the patient's diagnosis or treatment, and those services that are a benefit to the general patient population. Services to an individual patient will be reimbursed under Part B and services to the general patient population will be reimbursed under Part A. To determine the reimbursement under Part A, the Secretary will establish a "reasonable compensation equivalent" through regulations.

Duplicate Overhead Payments for Outpatient Services

In determining "reasonable" charges for outpatient services, the Secretary is required to issue regulations to limit the "reasonable charge to a percentage of the amount of the prevailing charge for similar services furnished in a physician's office, taking into account the extent to which overhead costs associated with such outpatient services have been included in the reasonable cost or charge of the facility."

Assistance at Surgery

Reimbursement for assistants at surgery in hospitals with an approved training program will be prohibited if the training program related to the medical specialty required for the surgical procedure and a qualified individual from the hospital staff is available to assist. Exceptions will be allowed pursuant to regulations to be de-

veloped by the Secretary by October 1, 1982, for the following circumstances: (1) "exceptional medical circumstances;" (2) a team of physicians is needed to perform complex procedures; (3) a physician of another specialty is needed for concurrent care; and (4) other circumstances deemed appropriate by the Secretary. Where an assistant at surgery is entitled to reimbursement, the Secretary is to determine the appropriate method of reimbursement.

Pensions

- *Limits on Contributions and Benefits* — Maximum contributions to a defined contribution plan would be reduced from $45,475 to $30,000. Maximum annual benefits under a defined benefit plan would be reduced from $136,425 to $90,000. The cost-of-living adjustments for these dollar limits would be suspended for two years. Beginning in 1986, the dollar limits would be adjusted for post-1984 cost-of-living increases. Maximum benefits under a defined benefit plan would be actuarially reduced if benefits commence before age 62 (present early retirement reduction occurs if distributions take place before age 55).

 These provisions apply to new pension plans not in existence on July 1, 1982. For pension plans in existence on July 1, 1982, the $30,000 and $90,000 limitations will apply for plan years beginning in 1983. Certain transition rules will be provided to ensure that benefits already earned under an existing plan are not reduced on account of the reduced limits.
- *Loans from Retirement Plans* — As a general rule, loans from a tax-qualified or governmental pension plan would be treated as a plan distribution. An exception to this rule is that a loan would not be treated as a distribution to the extent that the loan does not exceed the lesser of $50,000 or 50 percent of the present value of the vested employee benefit, but not less than $10,000. In other words, loans from plans at any one time would be limited to $10,000 or half of the vested benefits up to $50,000. This exception only applies if by its terms the loan is to be repaid within five years. Loans for principal residences would not be subject to the five year rule. Effective date: Loans made after August 13, 1982 (with transition rule).
- *"Top-Heavy" Plans* — Top-heavy plans are defined as pension plans (both corporate and noncorporate) under which more than 60 percent of the accrued benefits or contributions are provided for key employees. A key employee is an officer, a 5 percent owner, a 1 percent owner paid over $150,000 per year, or any of the employees owning the 10 largest interests in the employer. Special plan requirements for top-heavy plans include:
 - a rule limiting includible compensation to $200,000 (adjusted for inflation). Only the first $200,000 of an employee's compensation may be taken into account in determining contributions or benefits under the plan.
 - minimum vesting schedules: An employee's right to the accrued benefit derived from employer contributions must become nonforfeitable under a vesting schedule which satisfies one of two alternative schedules provided in the bill. A plan satisfies the first alternative vesting schedule ("three-year full vesting") if an employee who has at least three years of service with the employer maintaining the plan has a nonforfeitable right to 100 percent of his accrued benefit derived from employer contributions. A plan satisfies the second alternative vesting schedule ("six-year graded vesting") if an employee has a nonforfeitable right to at least 20 percent of the accrued benefit at the end of two years of service, 40 percent at the end of three years of service, 60 percent at the end of four years of service, 80 percent at the end of five years of service, and 100 percent after six years of service with the employer.

 An employer could not avoid the top-heavy plan rules by establishing a plan under a one-man corporate shell or by leasing employees from another employer. Congress has modified the impact of the *Keller* v. *Commissioner of IRS* decision by restricting corporations set up solely for tax-avoidance purposes.
- *Keogh Plan Limits* — Changes made have the effect of permitting a self-employed person to contribute into a Keogh retirement plan the lesser of 20 percent of earned income or $30,000. The $30,000 figure would be adjusted, after 1986, to reflect cost-of-living increases. At present the limits are 15 percent of income or $15,000. Effective for plan years beginning in 1984.
- *Estate Tax Exclusion* — A ceiling would be placed on the present law's unlimited estate

tax exclusion for annuities paid from qualified pension, stock-bonus or profit-sharing plans, tax deferred annuities, IRAs, and certain military retirement plans. The aggregate amount excludable from the gross estate would be $100,000 for any decedent dying after December 31, 1982.

- *Estimated Revenue Increase* for pension provisions: $2 billion over three years.

Medical Deductions

Medical expense deductions would be allowed for medical costs exceeding 5 percent of a taxpayer's adjusted gross income, compared with the current 3 percent. Taxpayers' ability to include prescription drug costs greater than 1 percent of adjusted gross income would be repealed after 1983. In addition, the current deduction for half of health insurance premiums up to $150 would be repealed.

* * * *

A stalemate of sorts is holding up congressional action on legislation to exempt the professions, including medicine, from the jurisdiction of the Federal Trade Commission.

The exemption was approved by the Senate Commerce Committee earlier this year as part of a reauthorization of the FTC's operations. However, Committee Chairman Robert Packwood (R-OR), a foe of exemption, has not brought it up for a vote by the full Senate.

On the House side, a flat reauthorization minus any exemption has been approved by the House Commerce Committee (H.R. 6995), with the proviso that another bill (H.R. 3722) which would place a moratorium on FTC action regarding state-regulated professions, will be offered from the floor as an amendment to H.R. 6995.

Support for the exemption, strongly backed by the AMA, is growing in the House where 214 members already have endorsed the bill (H.R. 3722) providing for a moratorium on the FTC's actions against the professions.

Packwood and the House Subcommittee Chairman James Florio (D-NY), have launched a coalition drive to permit FTC jurisdiction over the professions. The FTC's authorization is due to expire Oct. 1 and there is a chance an attempt will be made to keep the agency functioning through a continuing resolution providing operating funds if the reauthorization measures stall.

Both House and Senate action is expected shortly after the Labor Day recess.

* * * *

Dropped in the hopper as an early entry in the upcoming contest next year over national health plans was an old standby — catastrophic — with a new twist.

The bill was introduced by House Budget Committee Chairman James Jones (D-OK) and Rep. James Martin (R-NC), a member of the House Ways and Means Committee.

Under the legislation, employers would be encouraged to offer catastrophic coverage plans providing that employees would not have to incur out-of-pocket expenses of more than $3,500 yearly. For people not reached by such private insurance, the government would set up a Catastrophic Automatic Protection Plan (CAPP) paying all medical expenses after a specified amount of personal spending based on family income is incurred. CAPP would be administered by the Health and Human Services (HHS) Department. Benefits below the catastrophic level would be the same as those under Medicare.

The two lawmakers said the catastrophic benefit could be financed through imposing limitations on the tax deductions for the costs of providing employees health insurance. This limit would be $100 per month per family. If it is exceeded, employees would be taxed on the surplus as if it were income. The present tax deductions for medical expenses above a certain percentage of income would be eliminated, but people could still deduct part of the cost of their premium payments.

The bill also promotes prospective payments for Medicare by allowing states and legal entities to seek a waiver from the government.

The Catastrophic Health Expense and Cost Constraint (CHECC) plan's tax features are similar to those that have been advanced in some of the pro-competition plans introduced in this Congress. The Administration has said it will introduce its pro-competition proposal early next year.

Jones said he hoped CHECC will be a factor in the serious debate on the national health debate next year. He estimated the plan would save the government money, perhaps as much as $1 billion a year.

At a news conference, Martin said "the large, unexpected expenses of illness can result in fi-

nancial ruin" for people with inadequate coverage or none. "This legislation is long overdue in the effort to provide appropriate cost constraints and to provide financial assistance for medical bills for those now unprotected by private or public insurance," he said.

COUNCIL MINUTES
September 19, 1982

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, September 19th, 1982, in the Camelot Inn, Little Rock. Present were Council members Burge, Henry, Shuffield, Smith, Kolb, Wallick, Lawson, J. Bell, Lytle, P. Bell, Langston, Sanders, Warren, Joyce, Bracken, Clardy, Jones, Jouett, Logan, Morgan, Purdy, Williams, Wilkins, Lilly, Chudy, Phillips, Saltzman, Verser, Andrews, Kutait. Others present included Milton Deneke, Bob Benafield, George Mitchell, Mr. Bob Shoptaw, Thomas Hejna, Thomas Bruce, James Weber, Mrs. Ramona Taylor, Mr. Mitchell, Mr. LaMastus, Miss Richmond and C. C. Long.

The Council transacted business as follows:

1. Thomas Hejna of the State Health Department discussed a proposed plan for a pilot project for administration of Act 409 funds covering obstetrical care for indigent patients on a short-stay basis. Upon motion of Lilly, the Council voted approval of plans for the pilot project.
2. Charles Wilkins reported on a conference on nurse resources he attended as a representative of the Society. Upon his motion, the Council directed the chairman to reactivate the committee for liaison with the nursing profession so that communication would be re-established with the nurses.
3. Purcell Smith reported on the meeting of medicine and business representatives held in Little Rock September 17-18, 1982. He reported that a steering committee was being created to explore establishment of a medicine-business coalition and to draft proposed purposes for consideration of interested organizations. Upon motion of Dr. Smith, the Council went on record with an expression of continued interest in such a coalition.
4. Upon motion of Williams, the Council commended Dr. Smith and Dr. Long for the excellent meeting with business leaders.
5. Mr. Bob Shoptaw of Blue Cross-Blue Shield presented a critique of the proposal by Beverly Enterprises for a demonstration project on delivery of health care to Medicare and Medicaid patients. Upon motion of Wilkins, the Council voted to begin an educational program on the Beverly Enterprises proposal and to request the assistance of the American Medical Association in the educational program. Upon motion of Sanders, the Council directed that all members of the Society be advised regarding the proposal and urged to contact appropriate individuals about it.
6. The Council approved the recommendation of the Position Paper Committee that Carl Raque of Little Rock and Willis Stevens of El Dorado be appointed to fill vacancies on the committee.
7. Upon motion of Henry, the Council approved minutes of the Executive Committee meetings held July 28 and August 25:

The Executive Committee met on Wednesday, July 28, 1982, at the Little Rock Club, Little Rock. All members were present except Dr. John P. Burge. Present were Dr. Morriss M. Henry, president; Dr. Asa A. Crow, president-elect; Dr. Elvin Shuffield, secretary; Dr. Purcell Smith, Jr., immediate past president; Dr. Kemal Kutait, Dr. James Weber, Mr. Ken LaMastus, and Dr. C. C. Long.

The following items of business were discussed:

1. Considered the National Conference on the Utilization of Health Services which is being held in Chicago, September 30-October 1, 1982. The American Medical Association is co-sponsoring this conference with the American Hospital Association and Blue Cross-Blue Shield. President-elect Asa Crow and executive staff member C. C. Long were authorized to attend this meeting.
2. Considered the Conference on Strategies for Maximizing Hospital Nurse Resources to be held in Atlanta, Georgia, August 18-19, 1982, and voted to request that Dr. Charles Wilkins represent the Society at this conference with an alternate of Dr. James Weber.
3. Considered the letter from Dr. Larry Pipes of Beverly Enterprises regarding the Medicare

demonstration they are planning and voted that a letter be written to them raising questions concerning the project and expressing interest in continuing to be informed but to avoid any indication of approval or support of the project as it is now understood.

The Executive Committee and guests met with gubernatorial candidate Bill Clinton to discuss his views on health care and his proposed course of action if elected.

APPROVED: Morriss M. Henry, M.D.,
President

* * * *

The Executive Committee met in Little Rock on Wednesday, August 25, 1982. Executive Committee members present were Dr. John P. Burge, chairman of the Council; Dr. Morriss Henry, president; Dr. Asa A. Crow, president-elect; Dr. Elvin Shuffield, secretary; Dr. Purcell Smith, Jr., immediate past president; and Dr. C. C. Long.

The following items of business were discussed:

1. A request from a member that the Executive Committee bring before the Council his complaint concerning a presentation made at a recent Council meeting pertaining to remarks concerning some individuals who were in attendance at the meeting. The Executive Committee considered this request and voted that the members of the Council be reminded that the Society operated under parliamentary standards of Sturgis, and further recommended that the section of Sturgis pertaining to this occurrence be called to the Council's attention. Following are the rules pertaining to members' conduct during debate:

 "Debate and discussion must be fundamentally impersonal. A motion or point of discussion may be attacked vigorously but it is never permissible to attack the motives, character, or personality of a member or guest either directly or by any innuendo or implication. If a speaker fails or refuses to conduct his discussion in an orderly or courteous manner, he may be denied the right of the floor."

2. Discussion of the Beverly Enterprises' proposal to provide health care in Central Arkansas. After discussion, the Executive Committee recommended that a knowledgeable individual be contacted to present a summary of the Beverly proposal to the Council at its next meeting.
3. A bill was received for $775 from Rose Law Firm for work done in connection with the Medical Society pension trust. The Executive Committee approved payment of this bill.
4. Considered appointment of a member to serve on the Long Term Care Facility Advisory Board. The Council had recommended Dr. Woodbridge Morris but he declined the appointment. The Executive Committee recommended several other members and suggested they be contacted to see if one of them will accept the appointment.
5. Considered the request from the Amendment 60 Committee for promotion of this amendment and voted this be referred to the Council prior to any action.
6. Considered and voted that the amount that would be allocated for term life insurance for Ken LaMastus be applied to his regular life insurance since he is not physically qualified for term insurance. This amount would be $150 per year.

APPROVED: John P. Burge,
Chairman of the Council

8. Upon motion of Wilkins, the Council voted to advise the Arkansas Credit Council that they were in sympathy with the position of the Credit Council but felt support of proposed Constitutional Amendment #60 must be by individual members of the Society.
9. Paul Wallick, first vice president, reported for the ad hoc committee to review the Society committee structure. He reported that the committee recommended elimination of sub-committees on Traffic Safety, Immunization, Industrial Health, School Health and Physical Fitness, and Tuberculosis with responsibilities for those areas to revert to the standing Committee on Public Health. It was also recommended that the Advisory Committee to the Medical Assistants Society be eliminated and liaison with the Medical Assistants be the responsibility of the Public Relations Committee. Dr. Wallick reported that President Henry had increased the size of some committees to involve volunteers in activities of the Society. Upon motion of Wallick, the Council approved the recommendations of the Committee and the increase in committee memberships.

10. The Council adopted proposed Society position papers on Drug Identification, Drug Substitution, and Second Opinion, by motion of Williams. The Council commended James M. Kolb, Jr., and his Committee on Position Papers for their work.
11. Upon motion of Williams, the Council approved a recommendation by legal counsel that the draft of the proposed new defined contribution pension plan for Society employees be submitted to the Internal Revenue Service for review and comment.
12. John Bell, Chairman of the Long Range Planning Committee, reminded Council members of the planning meeting October 23-24 at Fairfield Bay and encouraged participation of Council members.

The meeting adjourned at 2:15 p.m.

APPROVED: John P. Burge, M.D.,
Chairman of the Council

LR/pw

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

CEPHALOSPORIN — OLD AND NEW

Presented by Robert Wilder Bradsher, Jr., M.D., Department of Medicine, UAMS, *December 7, 7:00 p.m.,* In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

WHAT'S NEW IN T. B.

Presented by William W. Stead, M.D., *December 8 and 9, 8:30 a.m. to 5:00 p.m.; December 10, 8:30 a.m. to 12:00 noon,* Camelot Hotel, Little Rock. Sponsored by UAMS. Seventeen hours Category I credit. Registration fee $100.00 (includes handout material, lunches and banquet). Registration limited to 200.

ACUTE VIRAL HEPATITIS, UPDATE OF SERODIAGNOSIS

Presented by T. J. Smith, M.D., Gastroenterologist, *December 20, 6:30 p.m.,* Memorial Hospital, North Little Rock. One hour Category I credit. No registration fee.

STABILIZATION OF THE CRITICALLY ILL NEWBORN

Presented by Nancy H. Ceaser, M.D., Neonatologist and Director of Intensive Care Nursery, Cox Medical Center, Springfield, Missouri, *January 18, 7:00 p.m.,* In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, third Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second, and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and second Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, December 11, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

FAYETTEVILLE — VA MEDICAL CENTER

Radiology Conference, first and third Tuesday, 1:00 p.m., Conference Room.
Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange: December, Dr. E. Clinton Texter, Gastroenterologist.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.
"Stress — The Hot Reactor," December 7, 7:00 a.m., St. Edward Mercy Medical Center, Doctors' Dining Area.

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, first and second Tuesday in December, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, December 2, 9, 16, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, December 1, 15, 8:15 a.m., Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category 1 credit.
GI Roundup, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Emergency Medicine Conference, first Wednesday, 1:30 p.m. to 1:30 p.m., Conference Room #1. (Cancelled in December).
Case of the Month, second and fourth Wednesday, 12:00 noon to 1 p.m., Conference Room #1.
Cardiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room.
General Medicine Conference, December 1, 12:00 noon to 1:00 p.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., Doctors Hospital.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S-1169 Laboratory.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing, Room #1.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S-1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

PINE BLUFF — AHEC

Family Practice Interesting Case Conference, each Monday, 12:30 p.m., Jefferson Regional Medical Center Classroom B.
OB/GYN Conference, second Tuesday each month, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Radiology Conference, each third Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Family Practice Residents' Conference, each first, fourth, and fifth Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Surgery Conference, each first Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Internal Medicine Conference, each second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.

Pediatric Conference, each third Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Behavioral Sciences Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Chest Conference, each first and third Friday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Southeast Arkansas Medical Lecture Series, each fourth Tuesday, 7:00 p.m., Colonial Steak House or Rosewood Country Club, Pine Bluff.

TEXARKANA — AHEC-Southwest
AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, December 17 and January 19, 12:30 p.m., St. Michael Hospital.



PERSONAL AND NEWS ITEMS

DR. FLOURNOY MOVES

Dr. Durwood W. Flournoy has joined the South Arkansas Diagnostic Clinic in El Dorado for the practice of Internal Medicine.

DR. WHITE SPEAKS

Dr. William White of Searcy spoke on physical fitness at a recent meeting of the Searcy Noon Lions.

DR. HENKER ON PROGRAM

At the Southern Medical Association annual meeting in Atlanta, Dr. Fred O. Henker, III, of Little Rock, directed a course for primary care physicians on new developments in treatment of psychiatric disorders.

DR. REUL MAKES PRESENTATION

Dr. Charles Reul of Fort Smith presented results of a research on special diagnostic goggles at the International Evoked Potential Symposium in Cleveland, Ohio. Dr. Reul's presentation title was, "Flash Evaluation Evoked Potential Using Light Emitting Diode Goggles Compared to Pattern Shift Visual Evoked Potentials."

DR. HOLT SPEAKS

Dr. Stephen Holt of Little Rock recently addressed The Central Arkansas Chapter of The American Lupus Society.

DR. NEWTON ELECTED

Dr. Doane Newton of Hot Springs is a newly elected Fellow of the American Academy of Pediatrics.

DR. DUNCAN SPEAKS

Dr. Philip Duncan of Fayetteville spoke on chronic lung disease at a meeting of the Northwest Arkansas Better Breathers Club.

DR. WILLIAMS

Dr. E. Walden Williams of Jonesboro talked on cancer of the kidneys and bladder at a recent meeting of the Craighead County Medical Assistants.

DRS. WOOLLAM AND SEIBEL PARTICIPATE

Drs. Chris Woollam and Donald Seibel of Forrest City participated in a six-week course entitled, "A Preventive Approach to Health and Disease" at the East Arkansas Community College.



THINGS TO COME

December 6-8

20th Annual Symposium Advances in Surgical Endocrinology. "What's New in Surgery." The University of Kansas College of Health Sciences and Hospital, Battenfield Auditorium, Student Center-Continuation Study Building, Kansas City, Kansas. 18 hours AMA Category I. 16.5 AAFP Prescribed hours. For further information, contact Office of Continuing Education, The University of Kansas College of Health Sciences and Hospital, Rainbow at Olathe Boulevard, Kansas City, Kansas 66103; phone (913) 588-4488.

1983

February 17-19

Third Annual Pediatric Infectious Disease Seminar. Las Vegas Hilton, Las Vegas. Depart-

ment of Pediatrics, Southwestern Medical School, The University of Texas Health Science Center at Dallas. 15 hours AMA Category I. 13½ AAFP Prescribed hours. PREP credit from American Academy of Pediatrics. Fee $250; $175 residents. For further information, contact: Marian Troup, Seminar Coordinator, Department of Pediatrics, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235, or phone (214) 688-3439.

May 5-8

107th Annual Session Arkansas Medical Society. Hilton Inn, Fayetteville. "Old and New — A Delicate Blend." For further information, contact Leah Richmond at headquarters office in Fort Smith.

OBITUARY

DR. ED G. HOPKINS, JR.

Dr. Hopkins died September 22, 1982. He was born on September 16, 1925, in Nashville. He was graduated from the University of Arkansas College of Medicine in 1948. He practiced in New Orleans from 1948 to 1949.

Dr. Hopkins trained in Pathology at the United States Marine Hospital on Staten Island, New York.

Before moving to Van Buren in 1963, Dr. Hopkins practiced in Nashville. He practiced family medicine with Edds Clinic in Van Buren from 1963 until his retirement in 1976.

Dr. Hopkins was a member of the First Methodist Church of Van Buren, Phi Chi Medical Fraternity, American Academy of General Practice, American Academy of Family Physicians and the Southern Medical Association.

Dr. Hopkins is survived by his wife, Joyce, two daughters and two sons.

DR. L. L. HUBENER

Dr. L. L. Hubener of Blytheville died September 13, 1982. He was born January 4, 1905, in McComb, Mississippi. He was a graduate of the University of Arkansas College of Medicine and the New York Poly-Clinic.

Dr. Hubener moved to Blytheville in 1936. From 1943 to 1965, he operated Blytheville Hospital. He was a life member of the Arkansas Medical Society and the American Medical Association, member of the Fifty Year Club, charter member of the Arkansas Civil Air Patrol, former Rotarian, and a Mason.

Dr. Hubener is survived by his wife, Irene Duffey Hubener, one son and his brother, Dr. Louis F. Hubener.

RESOLUTIONS

DR. WILLIAM J. RHINEHART

WHEREAS, the membership of the Pulaski County Medical Society notes with sincere sorrow the recent death of our colleague, William J. Rhinehart, M.D., and

WHEREAS, Dr. Rhinehart had been an honored member of this organization for thirty-two years; and

WHEREAS, he was held in the highest regard for his great knowledge in his chosen specialty of radiology and for his devotion to the affairs of the Society during the entire time of his membership.

BE IT THEREFORE RESOLVED THAT this resolution be made a part of the permanent archives of this Society; and

THAT a copy of this resolution be forwarded to Dr. Rhinehart's family as an expression of our sincere sympathy; and

THAT a copy be made available to the Journal of the Arkansas Medical Society for publication.

BY ACTION OF THE
MEMORIALS COMMITTEE
PULASKI COUNTY MEDICAL SOCIETY
H. Elvin Shuffield, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.



NEW MEMBERS

DR. JAMES PATRICK FLOREZ

Dr. Florez has joined the Pulaski County Medical Society. He is a native of Wyandotte County, Kansas.

Dr. Florez was graduated from the University of Kansas at Lawrence in 1968. After graduation from the University of Kansas School of Medicine, Kansas City, in 1973, he served his internship at the Kansas University Medical Center. From 1974 to 1976, Dr. Florez was a Medicine resident at the Medical Center. He served a Fellowship in Pulmonary and Internal Medicine at the University of Arkansas College of Medicine from 1978 to 1980.

Dr. Florez was associated with Baptist Medical Center in the practice of Emergency Medicine. He is a clinical instructor in Medicine at the University.

Dr. Florez specializes in Pulmonary Medicine. He is associated with Dr. Jerry Herron at #1 Lile Court in Little Rock.

DR. M. CARL COVEY

Dr. Covey, a native of Fort Smith, is a new member of the Washington County Medical Society.

Dr. Covey was granted a B.S.I.E. by the University of Arkansas at Fayetteville in 1975. He is a 1979 graduate of the University of Arkansas College of Medicine. His Anesthesiology internship and residency were at the University.

Dr. Covey specializes in Anesthesiology. His mailing address is Post Office Box 800, Gentry 72734.

RESIDENT MEMBERS

The Sebastian County Medical Society has added two new resident members to its roll:

DR. STEVE B. NELSON

Dr. Nelson, a native of San Angelo, Texas, is a resident with AHEC in Fort Smith. Dr. Nelson received his pre-med education at Hendrix College. He is a 1982 graduate of the University of Arkansas College of Medicine.

DR. CHARLES E. SMITH

Dr. Smith was born in Fort Smith. He is a 1977 graduate of the University of Arkansas at Fayetteville and a 1982 graduate of the University of Arkansas College of Medicine. Dr. Smith is a resident with AHEC in Fort Smith.

COMMITTEES — ARKANSAS MEDICAL SOCIETY — 1982-1983

APPOINTED BY PRESIDENT

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SCIENTIFIC ARTICLES

Heart Transplantation 221
Norman E. Shumway, M.D.

A Physician-Based, Statewide Health Information System: One Year's Experience 228
A. G. Dean, M.D., S. G. Mayer, MPH, P. C. White, Jr., M.D., and M. E. White, M.D.

FEATURES

ECG of the Month 234
John W. Watson, M.D.

Office Orthopaedics: "General Principles of Limb Amputation Surgery" 235
I. Leighton Millard, M.D.

Editorial: "Pertaining to the Heart" 236
Alfred Kahn, Jr., M.D.

From Other Years 238

Medicine in the News 238

Keeping Up 244

Personal and News Items 246

New Members 248

Obituaries 250

Resolutions 250

Things to Come 251

Woman's Auxiliary 251

Membership Roster 255

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Heart Transplantation

Norman E. Shumway, M.D.*

The question that we're asked most commonly, of course, is just what are the survival possibilities after heart transplantation, and this is asked just as often by referring physicians as it is by the prospective patients themselves. And so at the present time, and this is before the use of psychosporen-A, which we'll talk about a little bit later, the one year survival possibilities are between 65 and 70 percent; the chances for 5 year survival, after heart transplantation, about 50 percent. Now to go back though and look at some of the early experimental work, Dr. Campbell said that Alexis Carrell couldn't be here today, and of course we all regret it, but this was some of his first heart transplantation work just after the turn of the century; work done at the University of Chicago even before that university had a medical school. And what was done there was with very crude instruments and, of course, poor suture materials, very rough needles and so on; they were able with Charles Guthrie and Alexis Carrell to suture hearts from small animals—from puppies into the neck of adult to mongrel dogs. And some of these hearts would beat for several hours, and as a matter of fact, Carrell, whose picture you see here, was awarded the Nobel Prize in 1912 for his work in the transplantation of veins, arteries, and organs such as the heart. Carrell though was a very mysterious character, and like so many scientists who reach the ultimate heights, had very peculiar political views, too; and during World War II it was thought that he was primarily responsible for the apparent corruption of Colonel Lindberg and some of his views that were almost pro-Nazis in type. At any rate, he lived a long life, much of it miserable, dying finally in 1944. His collaborator however was this clean-cut looking gentleman who became head of the physiology department at Washington University at St. Louis after only three or four months of collaboration at Chicago with Carrell. It's still not known what Guthrie's contribution was to the work for which Carrell was finally saluted.

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Not much was done then in heart transplantation until the mid-nineteen thirties, and then Frank Mann and his associates at the Mayo Clinic (and he's sort of the father of experimental surgery in this country) developed a slightly different method, and with somewhat better instruments for putting the same puppy hearts into the necks of the adult mongrel dogs, and he found that you could ligate both of the carotid arteries in the dog and still have no noticeable ill effects. So the only difference between his work and Carrell's was that he used the vessels on both sides of the neck and some of these hearts would actually beat for several days. Again, not too much going on in the field until the mid-nineteen fifties, and some of you will remember the two-headed dog experiments that the Russians were talking about well, they also had the double heart experiments which were also done by Demecof and Schnisen; and what was done here was to place an auxiliary heart in the chest, not too different from the piggy back hearts that had been implanted in South Africa as many of you know. But some of the blood, at least, was propelled through this auxiliary heart coming from the right inferior pulmonary veins into the extra heart and then pumped back into the aorta. So there was a chance now that this kind of heart was doing some work. But we became interested in actually taking the heart out of the animal, replacing it in the orthotopic position so that the full circulatory burden would be handled or dealt with by the transplant. And so now, actually twenty years ago, we began to look into the problem of orthotopic homotransplantation of the heart and these seem to be the major difficulties or obstacles toward the achievement of an actual heart replacement.

First of all the surgical method, of course, would have to be developed since nothing of that nature had as yet worked. Second we had to know what the effects were of denervation of the heart because after all it's the only striated muscle in the body that does not wither and die after it

is denervated; and that had to be established that it could respond in a physiological manner to a situation of no central nervous system control. And then finally we didn't know anything about the control of homograft rejection, we didn't even know if in fact that there might be some difference in the rejection patterns of various types of tissue since at that time only skin and kidney transplants had been effective. So first of all in looking at the experimental set up using a left thoracotomy, which at that time was even somewhat novel, in the animal with total peripheral cannulation we had a field in which we could work; whereby, there were no cannulee in the area of the heart at all. The blood was taken away from the jugular vein, the femoral vein to the heart-lung machine back into the femoral artery, and so we had a perfect field in which to remove the heart and then to replace it. Well the whole idea to expedite the transplant was to leave significant portions of the recipient heart in position, and you can see in this artist's drawing that there is a single clamp through the transverse sinus separating the out flow tracks of the heart (the aorta, the pulmonary artery) from the in flow areas (the right atrium, the atrial septum, and of course the left atrium with its various pulmonary venous channels). The way this looked during one of the early experiments is seen here, there's a nice little picture of the fossa valus of the atrial septum; this, of course, is blood coming from the bronchial collateral circulation from the lungs into the pulmonary veins and the left atrium. The "life" as it were of the animal is, of course, during this time the responsibility of the heart lung machine. There is one other factor that seemed to be very important, of course, and that was to insure the viability of the transplant because, aside from the brain, (and not the brain at all times, I assure you) the heart is one of the biggest consumers of oxygen of any organ in the body. So it was necessary to do something about the assurance of myocardial viability. So what was done was simply to remove the heart and place it in a bowl of cold saline that was close to 2-4 degrees centigrade, and this would cool the heart quite completely so that periods up to almost seven hours were possible between the time that the heart was removed from the donor and before the coronary circulation was reestablished in the recipient. Incidentally, this was a method then that we used and have continued to use in all of our clinical heart surgery. Now we had to look at the physiological responses to this situation of a heart removed, a heart performing all the circulatory burden, and a heart, of course, divested of its central nervous system control. Well, we found that there was a rapid return to normal cardiac output. The venous pressure was normal. We saw no signs of congestive heart failure and very rarely was it necessary to use any Isuprul or any epinepherine or any other drug stimulants for cardiac action. This just simply shows how the cardiac output came up in these six animals into the normal range after a few days following the transplant. And we had one other very interesting physiological development and that was, since we left behind a fair amount of the recipient atrium, and we also had an atrium of the donor that dictated the ventricular response, we could compare (actually under various conditions of exercise, etc.) what the heart was doing with what the heart should be doing concerning heart rate. And the dog was particularly good for this because of the sinus arrhythmia characteristics whereby the host atrium was quite irregular as these arrows will show you here for the atrial electrocardiogram, but the arrows below were quite regular and those represented the atrial dominance of the ventricular response. So it was rather a neat physiological control as it were. We knew what should be going on in a true physiological state and we knew, of course, what was happening. And these animals appear to be in all respects quite normal. Now, we were also interested at that time in finding out what would happen if we took the heart out of an animal and left it on the bench for an hour or so in our cold saline solution and then reimplanted it; and we thought this would be an interesting experiment to determine what the long-term effects were of heart transplantation because, of course, we had no immune suppression at that time and therefore we were working without any of those obvious benefits. Well, we found the late hemodynamics of these auto transplants after about six months we could document reinnervation across the suture lines of both the parasympathetic and the sympathetic nervous systems. Now this stands to the contrary in any of the homographs that we've done, and in any of the animal experiments we have never documented reinnervation across the homograph suture line barrier. But in the autographs the situation was perfectly normal. You

couldn't tell these animals from control animals after about six months.

Now the first thing, of course, after we finally achieved some success in the laboratory with the animals beginning to live a period of time was to find out what the characteristics were of homographed rejection as it pertains to the heart graft. Etiologically you knew we rather hoped that the dog might be smart enough not to reject something as important to him as the heart, but obviously this was not the case. This is a picture of a pretty typical rejection situation; this is the donor atrium, this is the nicely healed suture line, and, of course, we had to find out if the suture lines would in fact heal in the presence of rather severe homographed rejection. But this is covered pretty well by endocardium—I think you can see one of the sutures there. A pulmonary vein—this is the retained segment of the host atrium. So we found to our dismay that these hearts were rejected pretty much at the same time interval as kidney transplants were rejected, something like seven plus or minus two or three days. So the next step again in the absence of immune suppression, and now kidney transplants clinically were beginning to be done between identical twins, so about the best we could do was to utilize litter mates, and this is the situation of rejection two months after a transplant which, of course, again was unguarded completely by immune suppression between litter mates. And we saw a rather different kind of rejection (this is the aortic valve, here's the aortic suture line of course) the aortic valve showing some calcification here some fibrous changes in the valve very much like the rheumatic valvulitis which is seen with various rheumatic states. The myocardium showed some hemorrhage but no where near as significant as we had seen earlier in mongrel transplants. This animal, in fact two months after the transplant, had died of congestive heart failure secondary to his aortic stenosis. Now about the same time, the early 1960's, because of work which was done by Schwartz and Danascheck, it was possible to use six mercaptopurine, then finally imuran, and then eventually steroids combined with imuran and there begin to be an outcropping of clinical kidney transplantation. And so we simply adopted for our heart transplant in the laboratory the same policy of immune suppression for the heart to protect the heart grafs that seem to be successful in kidney transplants. But we found because the animal was so delicate after such a large procedure as a heart transplant that we could not follow this policy—we would have to develop something rather special, rather select in obtaining long-term survival. So what we found was that if we could withhold the steroid therapy and the imuran for a period of time until there was a true rejection episode and then administer the drugs that we would have a possibility for long-term survival without the infectious complications which are so common even today in clinical heart transplants. So this shows, keying on the QRS voltage, the EKG, how a rejection crisis was averted or corrected by the use of therapy instituted at about the fifth day after this diminishing level or voltage amplitude showed that the graft was under a rejection threat. Utilizing then an interrupted program or intermittent immune suppression we were able for the first time to get long-term survival in the laboratory, and this is the first dog who lived one year after a homeograft cardiac transplant.

And about this same time, as Dr. Campbell just mentioned, our friends and, I guess, colleague Chris Bernard in South Africa had watched one of my early colleagues, Dick Louwer, who by that time had gone to Richmond, Virginia, do heart transplants in the laboratory and thought this might make a rather stylish entry into the clinical domain. So in late 1967 in December the first heart transplant was done, as you know at the Grutsur Hospital in South Africa. Well this ignited a tremendous interest because heart surgeons, being perhaps not the most humble individuals that you've ever run into, saw what this event had done for the life of Chris Bernard and so they jumped in with all kinds of interest. But you'll notice here that within a very few years as these patients begin to die almost with alarming regularity interest declined substantially. In fact at one point there was so much interest as it were in Houston for obtaining donors for heart transplants that it had almost this kind of a problem. With Denton Cooley here and I've forgotten who this fellow is, I guess they're still as friendly now as they were then; so the Houston experience was summarized by Life magazine in 1971 as some of you may remember this just before Life magazine disappeared from the news stands. Unfortunately I have figures at our institution only up to the end of last year, so far this year we've

done six heart transplants and two other transplants that we'll talk about in a minute. But you see in general that we've been moving along at a pace of about 12 to 25 or so a year. Obviously a fair number of these have been retransplanted and we may have a chance to talk about that aspect of it again a little later.

Now this generally shows the distribution of patients that have come, most of them, of course, from California but a fair number from the rest of the United States, a few now from abroad. We get an increasing number of patients from here which has always been pleasant. The ideal recipient, as you can see if by characterizing anybody, perhaps even a successful medical school applicant, but if you read that carefully you can see why we have had to get so many of our patients from outside the state of California. The recipient diagnosis is somewhat interesting I think because of the increasing numbers of patients particularly younger patients with idiopathetic cardiomyopathy, normal coronary arteries but with muscle disease to the point where their life is seriously threatened. Almost an even number of patients with a coronary artery (end stage coronary artery patients that have had in many cases two or three previous operations). There are specifically two or three contraindications at the present time to heart transplants. One is age as I get older all the time, unfortunately, I don't feel that as much as a contraindication as I did a few years ago. But the presence of systemic disease, significant systemic disease or infection of course would make it very difficult for patients under immune suppression to survive for any length of time. We can talk a little about pulmonary vascular resistance later when we get into some work on lung transplantation. Diabetes melitus which is insulin dependent is an absolute contraindication because of the needs still for significant amounts of steroid therapy in the post-transplant period.

Of the 202 patients, 102 of them lived at least one year, a percent of them rehabilitated (80%), and at that time the first of January 73 patients were living one week to 11 years after transplantation. This is the way it looks. Surgeons have a way of breaking down their material for presentation as the last several cases as opposed to the learning period or the early experience. We're not immune to that either and you can see that there is a significant improvement from 1974 to 1980 in the five year survival of patients as compared with the entire group as you see in the middle and the early group where the one year survival for the first year of our program was only 22%.

Now some of the reasons for this improvement in longevity after heart transplants I think are listed here. The most significant of these has been the transvenous endomyocardial biopsy for the diagnosis of rejection; and also for the diagnosis of the end of a rejection episode so that the heavy amounts of immune suppression can be curtailed, can be stopped as the muscle is recovering. The use also of rabid antithymacide globulin has been tremendously useful and this particular material is being improved upon all the time, more recently by the use of monoclonal antibodies. Immunologic monitoring has been useful although not as much as you might expect. And then finally we still have a vigorous program of cardiac retransplantation having had two patients that have undergone three heart transplants. To say a word about the transvenous endomyocardial biopsy, this is a great advantage I think for heart transplanters over those interested in kidney or liver since it's possible almost on a daily basis to insert a little catheter through the internal jugular vein and then to remove with a biotome a tiny bit of the right ventricular apex and look at it under the microscope to see if there is any homograft rejection. This is simply an enlarged view of this piano wire type instrument with a little handle here and little biters at the end. This is the way it looks during a rejection episode, you can see the mononuclear elements that are infiltrating here especially around the perivascular areas. Also there's edema separation of the myocardial fibrils and very clear cut evidence of an acute rejection episode. At this time then the heavier immune suppression can be begun and the little bit again like we were using originally in the dog experiments we have a chance to intermittently use varying amounts of immune suppression. Now the cause of death in the 129 patients that have died you'll notice that most of them have died of infection or certainly if you combine rejection with infection it accounts for the vast majority of the deaths. And that's a little misleading because the infectious complications are there because of the rejection episodes that had to be treated with heavy immune suppression; therefore, making the patient particularly sus-

ceptible to an infectious problem. Six patients with malignancy a little distressing to be sure but again a situation that will continue to obtain as long as is necessary to harness the entire immune system for graft survival. This slide is out of place but we looked at it from several standpoints and found that actually there was nothing very new in heart transplantation even less new perhaps in the stone heart syndrome that we've heard about from time to time. These slides are out of order but this is what we were going to do anyway is just to show them. This is one of the best instances I guess of rehabilitation. A young boy who is a student now, Stanford Undergraduate School, who two years after his transplant was able to participate in a very active life and has actually been written up by his mother who is a professional journalist an interesting little book called *Thursday's Child* that some of you might have seen.

Now there's been interest, too, because of the improvement in clinical results at our institution and probably in some other places. In England two programs in heart transplantation have been reignited recently but not without a considerable furor and this a sort of press that is very difficult in a national health situation as they have in England for any transplant program to survive. As they say here, heart transplants are tragically inappropriate, and of course that's looking at it from a functionaire's point of view and not really so much I think from the point of view of the patient.

Now this is a summary slide, this is going to be actually the last slide of this little discussion, but it shows in contrast to the patients that have been (the 60 patients that we have accepted for heart transplantation but for whom no heart graft was available for one reason or another) only one of them lived for as long as nine months and this compares or contrasts, we think, quite significantly with the patient's that have had heart transplantation and their 5 year survival limits. Those from 74 to 80 you see here, out of the 40% 5 year survival, the early ones out at something like 20%. Now just to go over the immune suppression schedule, this probably isn't of great interest to you unless you are working in the field itself, but we have more recently been using psychosporin-A in the last six patients that have undergone a heart transplant. Psychosporin-A which is a fungal derivative and a very strong immune suppressant which was developed by the Sandos Laboratories in Basel, Switzerland and has only recently been available in clinical tissue transplantation. The details of it have been worked out in two places, one in Cambridge, England, by Roy Cong and the other by Tom Starsul wherever he is at the present time, maybe in transit at this very moment. At any rate psychosporin-A has been extremely useful to us because of our ability to come way down on the amounts of prednisone that have been necessary. In the experimental work that preceded the use of psychosporin we have animals (primates) on the drug on an every other day basis without any other immune suppressant. This slide shows some experiments that we did in primates which are particularly useful in establishing the dosages of psychosporin and what was done here was to take two monkeys, Rhesus monkeys, or Similogous monkeys and switching the hearts actually so that we would give one the protocol for the drug and the other one would be the precise immunologic control. So this animal would be not only a donor but a recipient and so would this and so we had really for the first time a living heart donor and an almost perfect experiment from the standpoint of control of the immunologic aspects stimulated by the transplant; and so we were able starting out with a dose of psychosporin we were able to cut it by actually ten times less and still have a significant and effective immune regulatory response.

Now this is again another picture of the first animal that has lived after transplantation of the heart with both lungs. There are several slides ahead of this that would develop the material leading up to the fact that it's possible now for transplantation of not just the heart but of the heart with both lungs to succede in primates with the use of psychosporin to obtain long-term survival. This was the first animal, we now have several that have lived one year after transplantation, homotransplantation of the heart with both lungs.

But I threatened to tell you about retransplantation earlier and this was a summary of it, of the experience up to September of last year when the 18 patients had undergone retransplants. One of them in fact had a second retransplant. The infectious complications are still severe and different however, in the psychosporin treated patients, as opposed to those that are treated

primarily by immuran and by steroids and by rabid anti-thymocyte globin. But almost every patient in our series has had at least one significant infection. With psychosporen, we are seeing more problems with viral infection than we are with the fungal bacteria or the nocaderal infections, which are so common after the use of steroids in immunaran without psychosporen.

This picture was placed in the group just to remind me to say something about donors. This is an early astic donor, you can see I think this cavity in his chest, where the heart ostensibly had been removed and maybe this was in fact, precurser of the stone heart.

This is a patient with left ventricular tumor. I just wanted to show this to indicate a huge fibrosis histiocytoma of the left ventricular, which is not malignant microscopically, but because of its presence, it's space occuping mass in the left ventricle which had comprised the cavity. Here is the left ventricular cavity was necessary for transplant to relieve this condition. She was a 19-year-old female who had been biopsied in Pittsburgh and then sent out our way for the transplant. This is of course the ventricular septum intact and this is the right ventricular cavity. This patient is now about a year and a half after transplantation, on very minimal dosages of prednisone and getting along nicely. One other possibility, and one other aspect of the program which has been necessary and useful has been the removal of hearts at a distance, usually in the Los Angeles area and then flying them back up to Palo Alto, where the hearts are implanted. So during the period of January 77 to September 78, we took a look at 39 transplants where there is almost equal distribution between the number where the donor was on the premises, in the next operating room, or where the heart had been removed in the Los Angeles area and then brought to Palo Alto. We found alive at two years, just about the same number of patients in each group who didn't seem to make any difference. The only true difference was in the ischemic interval which you will notice was three times as long in this in-heart procurement as opposed to the less than an hour for the usual ischemic time when the heart is removed on the premises. But this has made it possible to obtain many more donor organs, of course because Los Angeles has about a half a dozen very busy kidney transplant programs and we have a chance to collaborate with all of them. Every surgeon, I guess every doctor, has a case that he thinks is the height of his experience and this was certainly one for us. This was a 16-year-old boy, with a cardiomotility, who had his initial transplant at this point here, where he had here is his QSR-voltage, notice that it went up and down and even with heavy steroid therapy at the end of about 57 days, it was clear that we were going to lose this patient, because of unremitting rejection of the graft. There was just no way to secure a long term remission of his homograph rejection. So at this point fortunately another donor became available. A second heart transplant was done and then we had the following upswing in his EKG voltage as you will notice here. Here, his biopsies, which were done at this point, showed no rejection, he got by on low dosages of steroid and in fact now, four years later, he has not had a single rejection episode and there was just as many HLA mismatches incidently on the second between the tissue of the second donor as the tissue from the first donor. So clearly we are not measuring all of the essentials of tissue matching and is necessary sometimes to proceed on a semi-impuric basis as we did and was fortunate in this particular case.

Now to develop just a little bit about the future, and now it's beginning to be the present, of transplantation of the heart. This is the heart and lungs obviously of one of the smaller monkey groups. Dr. Bruce Wrights has been doing most of this work in a laboratory. Has a normal man's glow seven and a half and he shows how small this situation is in making the transplant. It is so small and so difficult in matter of fact that we had to borrow from our original technique for orthotopic transplantation and utilize a cuff of the right atrium, as you see here. Cannulation is done on the usual way of the right atrium of the host and then this cuff of right atrium remains behind so that we don't need to make the small vena cable anastomosis because of course if you are transplanting the heart with both lungs you need to make the connections only to the wind pipe, to the trachea to the aorta and then to the venacave, and so in ligating the venacava/ anastomosis we simply suture the right atrium together the aorta and the trachea as you see here.

The slides are somewhat out of order so I'm going to have to tell you about the clinical situation on the transplants of the heart and both

lungs. Our first patient was operated on 55 days ago. Forty-five-year-old woman who had primary pulmonary hypertension. And the whole idea of course, it's an approach to lung transplantation and its made a lot better by the fact that we have all of this information from this standpoint of monitoring from our crude, from our heart transplantation experience. So we're presuming, and this has been true in the laboratory, that the heart and the lungs are rejected simultaneously pari passu, so that as we biopsy the heart we will know specifically what is going on also in the lungs. So we don't have to wait for changes in the X-rays or we don't have to wait for blood gases to deteriorate. So by monitoring with cardiac biopsy, what's going on in the lungs, we have a much better chance we think for long termed survival of patients who basically need, as this woman did, lung transplantation. While she has had several rejection episodes, all of which have been treated very successfully and is at the present time up and around eating a normal diet. But still in the hospital, 55 days later. And if some of those slides seem to be a little bit out of order, much of the blame could be mine, because we were up all night doing our second patient, a thirty-eight-year-old Eisenmenger patient who had again advanced pulmonary hypertension, but on the basis of an untreated ventricular septal defect and his transplant of the heart and both lungs was done last night and his progress so far is really satisfactory. The advantage we think with the psychosporen immune supression material in the lung transplants, and that is that it permits very solid healing in all of the work that has gone before on lung transplantation the betenoir has been the healing. Between the bronchis at the bronchial area or at the trachea area between the transplant and the host, and that is because of the necessity for giving steroids which now can be cut way down with the use of psychosporen and insure firm healing of that very important link between the donor tissue and the recipient.

So this is essentially where we stand today: a vigorous program that goes on with orthotopic heart transplantation and a beginning clinical program based on what we think fairly solid experimental evidence that transplantation of the heart with both lungs attached, is a feasible clinical maneuver in appropriate and selected cases.

A Physician-Based, Statewide Health Information System: One Year's Experience

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Summary

Communicable diseases account for a small fraction of all disease in the United States. To gain information on other conditions seen by physicians, an experimental statewide disease reporting system was operated for a year in Arkansas. Physicians participated on a rotating, randomly-allocated schedule, and each provided the age, sex, race, type of visit, county of residence, duration and type of condition for all patients seen in a 24-hour period. During a 13-month period, 43% of 1,343 eligible physicians participated despite the newness of the system and difficulties with computer turnaround time.

Information was obtained on 14,954 patient contacts. Office visits accounted for 76% of the contacts; 19% occurred in hospitals, 2% in emergency rooms, 1% in nursing homes, and 1% elsewhere. General and family practitioners saw 58% of the patients and internists 10%, with less than 7% in each of seven other major specialties. The most frequent reasons for patient-physician contacts were upper respiratory infection (9.3%), hypertension (5.5%), general preventive examinations (4.6%), mental and social problems (4.3%), obstetrics (3.9%), fractures (3.8%), cancer (3.4%), miscellaneous gastrointestinal conditions (3.3%), urinary tract problems (3.2%), and arthritis and connective tissue disease (3.1%). These ten diagnostic categories accounted for 44% of the diagnoses.

The system allows estimates of contacts per person for all conditions (4.1 per year) and for specific categories on a statewide and district basis. Time, place, and person can easily be determined for physician contacts; approximate incidence information can be derived by determining duration of illness. It is also possible to estimate the distance patients travel to obtain medical care in different parts of the state for various conditions. The system is a useful supplement to more narrowly focused traditional surveillance systems and could be an important part of a comprehensive statewide disease surveillance system.

INTRODUCTION

As serious, acute communicable diseases occur less frequently in the United States, surveillance and epidemiologic analysis of other types of illness becomes increasingly important. In order to obtain better surveillance of disease in the state of Arkansas, a statewide system with the following features was designed:

1. All diseases were included.
2. All physicians in the state were asked to participate rather than depending on selected "sentinels." Each physician reported for a single randomly-chosen day during the year. The system supplemented, but did not replace, normal reporting of communicable disease.
3. The unit of reporting was the face-to-face patient-physician contact, regardless of location, and the results include both inpatient and outpatient data.
4. Age, race, sex, geographic region, and diagnosis were reported, but patients' names were not included.
5. Sufficient data accrued over a week or two to follow trends in the common diseases.

The system is quite similar to the National Ambulatory Medical Care Survey.[1] The operation of the system for a full year is described, along with examples of the kind of information which can be obtained.

METHODS

The project was a joint effort of the Arkansas Medical Association, the Arkansas Academy of Family Practitioners and the Arkansas Department of Health.

Licensed physicians in the state were assigned arbitrary numbers and each working day, five were selected by means of a random number table.

1. Formerly Epidemic Intelligence Service (EIS) Officer, Center for Disease Control, and Acting State Epidemiologist, Arkansas Department of Health, Little Rock, Arkansas. Currently Director of Disease Prevention and Control, Minnesota Department of Health, 717 SE Delaware Street, Minneapolis, Minnesota 55440.
2. Student Intern, Minnesota Department of Health and University of Minnesota School of Public Health, Department of Public Health Administration.
3. 1109 North Jackson Street, Albany, Georgia 31701, formerly State Epidemiologist, Arkansas Department of Health.
4. Formerly EIS Officer assigned to the Arkansas Department of Health.

Each physician was assigned a single day in the course of a year and asked to provide data on all patients seen during that 24-hour period. Anesthesiologists, pathologists, radiologists and those not in the clinical practice were excluded. An introductory letter was sent to the physician, and further explanation was made by a secretary on the telephone. A package consisting of printed report cards (Figure 1), instructions, and a return, stamped envelope was mailed to the physician, and he was asked to complete one card for each patient seen on the reporting day. Suggestions were provided for efficient processing of the cards in the office routine. For hospital or nursing home visits it was suggested that the cards be carried in the physician's pocket and completed as visits were made.

Patient-contact Form

The reporting form completed for each patient contact is shown in Figure 1. A coversheet provided details concerning the physician's location, date of report, and specialty, and this information was added to each patient report card during data processing. Coding of counties, diagnoses, and other items was done by clerical staff at the Department of Health with assistance from epidemiologists. Diagnoses were coded according to a draft of the ICDA-8 compatible *International Classification of Health Problems in Primary Care* which has since been published in a form compatible with the ICD-9-CM coding system.[2] The cards were keypunched, and the data processed with the aid of a large computer. The output for each diagnostic category consisted of the number of cases per 1000 patient-doctor contacts, displayed by month for each of the five regions of the state. For each diagnosis, the age, sex, race, specialty of physician, location of visit, and duration were similarly tabulated.

Figure 1

ARKANSAS DISEASE SURVEILLANCE SYSTEM

			Seen In	
Age ___	Male 1___	White 1___	Office	1___
	Female 2___	Black 2___	Nur. Home	2___
		Other 3___	Hospital	3___
			EP	4___
			Other	5___

County of Residence _____

Main Diagnosis (Problem) For Which Seen Today

1) _____

2) _____

Duration of Condition	(1)	(2)
less than 2 weeks	1___	1___
2 weeks to 1 year	2___	2___
1 year or more	3___	3___

RESULTS

Reports were collected from January, 1976 to March, 1977. A total of 16,992 diagnoses were reported for 14,954 contacts. Incorrect or incomplete information invalidated 369 cards (2.5%). During this time, 575 (43%) of the state's approximately 1,343 eligible physicians provided data from one day of practice. The average number of patients seen was 26, leading to a statewide estimate of 4.1 physician contacts per year for each of Arkansas' 2,100,000 citizens. Two diagnoses were recorded for 13.6% of the visits. Seventy-six percent of the contacts were in offices or clinics, 19% in inpatient hospital settings, 2% in emergency rooms, 1% in nursing homes, and 1% elsewhere; contacts were distributed among specialties as seen in Table 1.

The state was arbitrarily divided along county lines into five geographic regions with roughly equal populations. The response rate of physicians ranged from 35% to 48% in the five regions. Internists had the highest rate of participation (59%) and psychiatrists the lowest (36%) among the specialties.

The 20 most frequent diagnostic categories are shown in Table 2. The first 20 categories accounted for 70% of all visits. The remaining 30% were distributed among 68 other disease groups which were created from several hundred diagnostic code categories.

Information which can be obtained from the system will be illustrated by presenting selected

Table 1

Specialty	Percent of Reported Diagnoses
General or Family Practice	58.0
Internal Medicine	10.3
Surgery	6.8
Pediatrics	5.5
Obstetrics & Gynecology	3.8
Orthopedics	1.9
Psychiatry	2.5
Eye-Ear-Nose-Throat	3.8
Dermatology	1.2
Other	5.6
TOTAL	99.4%

Distribution of contacts among specialties.

characteristics of visits for upper respiratory infections, hypertension, and physical examinations — the three most common "diagnoses."

Upper Respiratory Infections (URI)

This highly seasonal condition was the single most frequent reason for physician-patient contacts despite its usually self-limited course. Using data from the Arkansas Disease Surveillance System (ADSS), a map can be constructed (Figure 2) portraying the rise and fall of rates in various parts of the state. Such information is valuable during influenza outbreaks and would give a detailed picture of any widespread respiratory disease epidemic, including the age, sex, race and location of the groups affected. Systems such as ADSS, if combined with active virologic sampling in areas found to have a high incidence of URIs, could provide specific information on the patterns of viral disease in the general public.

Table 2
THE TWENTY MOST FREQUENT CAUSES OF PHYSICIAN CONTACTS IN ARKANSAS, JANUARY 1976 TO MARCH 1977

Diagnostic Category	Percent of Total Visits
Upper Respiratory Infection	9.3
Hypertension	5.5
Examination, General Preventive	4.6
Mental and Social Problems	4.3
Obstetrics	3.9
Fractures	3.8
Malignant Neoplasms	3.4
Gastrointestinal Diseases (excluding neoplasms, peptic ulcer, appendicitis, and cholestitis)	3.3
Diseases of the Urinary Tract	3.2
Arthritis and Connective Tissue Diseases	3.1
Orthopedics (excluding fractures and arthritis)	3.1
Symptoms Without Diagnosis	2.9
Diabetes	2.8
Lacerations, Open Wounds	2.7
Eye Conditions (except allergy and infection)	2.6
Infectious Disease (except gastrointestinal)	2.5
Noninfectious Skin Diseases	2.5
Ear Diseases	2.3
Chronic Ischemic Heart Disease	2.2
Allergy	2.2
TOTAL	70.2%

Hypertension

Hypertension was listed for 6.2% of all contacts. Of the 925 such contacts, 90% were in a physician's office, 8% in the hospital (inpatient), 1% in a nursing home, and 1% in other places. General or family practitioners reported 75% of the hypertension contacts and internists 18%; all other specialties accounted for 7%.

Sixty-five percent of the patients were female and 35% male. Visits for hypertension were 1.6 times commoner among blacks than whites. The duration of the hypertension was: 0-2 weeks (4%); $>$ 2 weeks to 1 year (15%) and $>$ 1 year (72%).

Although only 4% of the cases were newly diagnosed (within two weeks), this leads to an estimate of 21,000 newly diagnosed hypertensives per year or about 1% of the population on a statewide basis. An estimate of the number of hypertensives in Arkansas is available from the National Center for Health Statistics. Using this figure, the 407,155 estimated hypertensives had, in addition to their "normal" 4.1 physician contacts during the year, an additional 1.05 office visits and 0.09 hospital visits per person.

Physical Examinations

Nearly 5% of the contacts were recorded as physical examinations, and this was the second most frequent reason for a physician contact. At first glance this seems excessive, but further study discloses that 31% of the physical examinations were for children $<$ 5 years old and 41% for women of childbearing age.

The estimated number of examinations for children $<$ 5 is 111,000 per year or 0.67 examinations per child per year. Information of this nature, collected uniformly over a period of years, could be invaluable in planning and evaluating educational and other efforts to stimulate or influence preventive activities such as periodic physical examinations for groups with special risks. More specific information about the type of examination could be obtained by including specific questions on the report card.

DISCUSSION

The earliest attempts to describe disease patterns statistically, such as that of John Graunt in 17th century Britain, were concerned with mortality. Death certificate data remain, in most states, the only all-condition information on disease patterns, although in some geographic areas large data files on hospital charges, medicare or medicaid patients or Blue Cross-Blue Shield

subscribers can be pieced together to provide some reflection of morbidity data as opposed to mortality data.

Large scale office-based physician data collection systems for morbidity have been implemented in Great Britain,[3] Australia,[4,5] and Canada.[6,7] In the United States, several morbidity surveillance systems have been undertaken using the office-based physician as the primary source of data. One such effort was that of the Department of Family Practice of the Medical College of Virginia.[8] For a two-year period, 118 family practice residents and physicians recorded all patient problems evaluated, yielding a data bank of 526,196 health-care problems. Analysis of these was aimed at redesigning family practice residency curricula and redesigning patient-care systems in the area served by the participating physicians (in teaching and nonteaching practices in rural, suburban, and urban communities).

On a broader scale, the National Ambulatory Medical Care Survey (NAMCS),[1] begun in 1973 and carried out by the National Center for Health Statistics, provides data on the extent and type of ambulatory medical care provided by office-based physicians throughout the United States. Although NAMCS-generated morbidity data are useful for planning and policy-making purposes on the national scale, they are considerably less useful for individual states or their geographic subdivisions, and published reports do not appear until several years after data collection. One example of an effort to provide more precise, meaningful and inexpensive local data on the utilization of office-based physician services is the Michigan Ambulatory Medical Care Survey which uses



FIGURE 2.
Upper respiratory infections as percentage of total reported visits, by month and region in Arkansas — February 1976-February 1977. The total number of upper respiratory infections reported was 1,583. The vertical axes show percent of total visits in the region. Months are represented on the horizontal axes.

NAMCS forms and procedures with sampling adapted to provide state-specific information.[9]

Although we were not aware of the NAMCS when the ADSS was first implemented, there are remarkable similarities in both methods and results. The fact that NAMCS is able to obtain an 80% response rate from physicians in contrast to the 43% experienced in Arkansas suggests that better response is an attainable goal with sufficient resources and organization.

The ADSS was remarkably inexpensive in contrast to house-to-house interviewing, as in the National Household Interview Survey which requires thousands of personal visits by professional interviewers. The entire ADSS was operated by a half-time clerical employee with consultation from the state epidemiologist as needed. Data processing costs, including programming through a private firm, were $2,800 for the first six months. Postage, printing and telephone costs were an estimated $3 to $5 per responding physician, depending upon the number of report cards and use of low-cost telephone (WATS) service. The total cost of the system in a state of 2 million people was in the range of $10,000-$20,000 annually, including personnel, supplies, postage, and data processing. Greater resources, particularly in data processing, would be desirable to make the system function smoothly, provide information soon after receipt of the cards, and feed this information in understandable and useful form back to the physician, the community and the public.

In proposing a new system of data collection it is appropriate to ask "What good is it?" Examples of the kind of data which can be obtained are given above. For each reasonably common disease, estimates of its frequency, distribution, pattern of care, and other features are available in more comprehensive form than from classical communicable "disease reporting" systems or even, in most states, from piecing together hospital discharge data, medicare-medicaid and private insurance data. Since in the ADSS only about one of 581 of all cases seen were sampled, the system is not useful for surveillance of diseases for which public health response is directed toward individual cases — gonorrhea or syphilis for example. It can be used for checking the completeness of reporting of such diseases. Gonorrhea cases in Arkansas estimated from the random system were 19,754 per year compared with 3,864 cases officially reported from private physicians and 8,087 from the public clinics in 1976. Hence, at least 40% of the gonorrhea cases are not reported through normal channels, and the actual figure may be closer to 80% if one assumes that the random system detected only private cases.

Potential uses of data generated by the system include the following:

1. Providing a weekly or monthly statewide "disease map" (similar to weather maps in newspapers) which shows diseases and conditions common in various parts of the state.
2. Formulating measures which are more complete and timely than those using mortality data alone, of incidence and prevalence of specific diseases and conditions for a given geographic area.
3. Aiding practicing physicians and medical educators in identifying education needs which are closely related to the content of local practice.
4. Determining distances that patients must travel to obtain medical care and as indicators of the amount of care received by individuals in medically underserved areas.
5. Providing a basis for a wide variety of epidemiologic studies to examine relationships of specific diseases to air pollution, urban/rural population status, amount of medical care services available, and to other diseases or conditions.
6. Determining the effectiveness of existing (and the need for new) public health and private health and medical care programs (e.g., V.D. control, immunization, blood pressure screening).
7. Assessing the number of visits physicians devote to individual diseases and conditions (e.g., the common cold, hypertension) and to diseases preventable by such means as immunization or pure water supplies. Public health and/or educational programs could then be directed specifically at the most common problems and the results assessed by measuring changes in the number of visits.

In addition to the data obtained from the ADSS, it would be desirable to obtain information on incidence, prevalence, and level of disability for conditions resulting in physician contacts. Prevalence of risk factors for chronic disease such as smoking and alcohol intake is also

of increasing interest for public health and educational efforts. By obtaining information on the number of contacts during the past year and the date of the last physician visit for each patient, it is possible to obtain estimates of all these variables. A system giving incidence, prevalence, and days of disability as well as contacts with physicians for each major disease would provide a great deal of information useful to physicians and public health agencies in conducting balanced programs of disease prevention and control.

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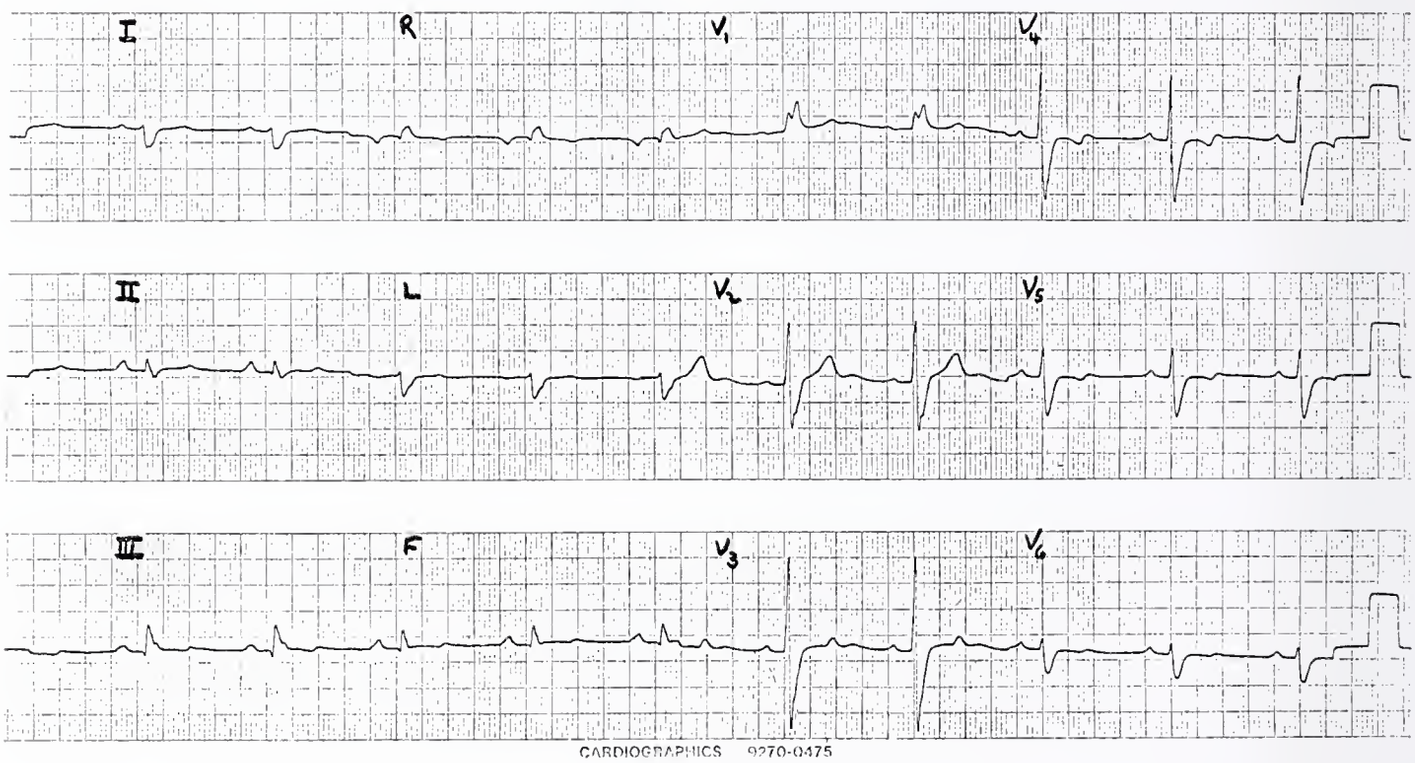
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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 237)

HISTORY: J. W. is a 65-year-old man who has presented to the hospital because of syncope. His admission electrocardiogram is shown below. How would you manage the patient?



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Office Orthopaedics

General Principles of Limb Amputation Surgery

I. Leighton Millard, M.D.*

General Principles of Limb Amputation Surgery

When the presence of necrotic tissue makes limb amputation necessary, there are several important factors to be considered in the construction of a terminal motor and sensory organ (the stump) that will allow the patient to function with an artificial limb.

Skin

The amputation site should be selected at the most distal level that will be consistent with a well healed non-tender skin surface. The primary disease process may make it necessary to modify this selection, especially if secondary closure is necessary. Modern prosthetic design and fitting techniques have made most of the old classical amputation levels obsolete. Even when skin grafts are necessary to close the end or preserve the length of a stump, prosthetic innovations are available to accommodate for these less than ideal skin surfaces. In rare instances, flap grafts may be needed to prepare a stump for weight bearing.

Muscle

Because joint weakness and contracture interfere with prosthesis fitting and use, it is important to anchor the divided muscles at the stump end. Imbalance of muscle function makes this difficult, but if the muscles are fixed to bone under as near normal physiological tension as possible, many problems can be averted. Research is under way at present into methods, equipment and techniques of more efficiently balancing muscle tension at the time of surgery.

Bone

A smooth distal bone surface is essential for the efficient transmission of forces from the skeleton to the artificial limb. The bone must be sectioned with a fine tooth saw at a length that will allow soft tissue closure. The cut edges should then be rounded and any available periosteum sutured over the end. In general it is best to avoid a bulky or enlarged stump end, but some prostheses take advantage of a bulbous end as a suspensory mechanism. Therefore the surgeon should have in mind the type of prosthesis that will be best for his patient before he closes the stump.

Nerves

Painful neuromas are an all too frequent problem following amputation surgery. Cut nerves heal by forming scar tissue in which nerve and connective tissues are intertwined. This condition may be painful if the neuroma is fixed to surrounding tissues so that pressure or traction forces are present. It has also been shown that neuromas are capable of developing independent electrical activity that is pain producing. It appears that our best chance of avoiding painful neuromata is to ligate the nerve to prevent hematoma formations and apply moderate, gentle traction before sectioning. This allows retraction of the cut nerve end so that it comes to lie in a bed of soft muscle.

Closure

When the opposing muscle groups have been fixed over the smooth rounded bone end, it is necessary to close the remaining soft tissues without dead space or undue tension. Drainage systems often help to augment this stage of closure.

The subcutaneous and skin layers should then be closed, according to good surgical technique, smoothly and without tension.

Conclusion

The ideal amputation stump is seldom achieved; but if these brief general principles are followed carefully, a good functional stump will be available.

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EDITORIAL

Pertaining to the Heart

Alfred Kahn, Jr., M.D.

Many ill patients are reluctant to discuss sex problems with their physicians. One of the major concerns of many patients who are recovering from acute myocardial infarction is their ability to resume a normal sexual life. Frequently, this aspect of recovery is not discussed by either the physician or the patient — often due to mutual reluctance to discuss problems of sexuality. Aside from sex representing a somewhat stressful activity for a person with a major illness, sexuality and medicine may relate at various other levels of illnesses. The matter of "Cardiovascular Drugs and Sexuality" has been reviewed by C. Papadopoulos (Archives of Internal Medicine, Vol. 140, Page 1341, October, 1980). In this review, Papadopoulos discusses not alone the sexual affects of drugs on males but also on females. He has a very good chart showing the side effects of cardiovascular drugs in which he takes a group of most commonly used drugs and indicates whether or not they cause one of the following: impotence, ejaculation difficulties, loss or decrease of libido, gynecomastia, menstrual irregularities, inhibition of vaginal lubrication, and breast enlargement in women. It is a matter of considerable interest that of the 16 drugs recommended in this graph, all but four of them may cause impotence. The other symptoms are much less likely to occur.

The author discusses the various cardiovascular drugs in categories. He found that diuretics as a group are known to cause occasional loss of libido and may inhibit vaginal lubrication. As a group, they are unlikely to cause the other side effects. He discusses the adroneuroic inhibiting drugs including Rauwolfia durgs, Guanethidine, Methyldopa, Clonidine, Phenoxybenzamine, and Beta-Adrenergic Blocking Agents. These drugs have varying side effects but are capable of interfering with sexual function. The vasodilator group of drugs, according to the author, are relatively free of causing sexual dysfunction. Papadopoulos reports that monoamine oxidase inhibitors, as Pargyline, may cause some delay in ejaculation and impotence. He further reports that Disopyramide, an antiarrhythmic drug, may cause impotence in high dosages. The hypolipidemic drugs occasionally cause side effects of significance related to the sexual functions; Clofibrate caused some decrease in libido and impotence in 14% of the patients. Digitalis is known to produce estrogen-like effects and gynecomastia occasionally seen in men. It is interesting that Papadopoulos states that at times some of the cardiovascular drugs have a beneficial effect on sexuality. He recommends the use of Beta-blockers and sublingual nitrates prior to intercourse. He further reports that there are articles in the literature stating that Amyl nitrate is said to enhance the intensity of sensation in sexual intercourse. Of particular importance to the practicing physician is the fact that patients often desire to discuss sexuality in relation to their particular disease and the physician should be prepared to discuss this. The physician should be particularly alert to the fact that some disorders of sexual function are iatrogenic and due to the medications employed, as this article suggests.

The use of cardiac surgery has introduced some lively discussions between physicians — the indications for surgery, the type of surgery, the benefits of surgery. In the February, 1981 issue of *Circulation* one of such controversies is presented. Bonow, Kent, Rosing, Lipson, Borer, McIntosh, Marrow, and Epstein have published a paper entitled, "Aortic Valve Replacement Without Myocardial Revascularization in Patient With Combined Aortic Valvular and Coronary Artery

Disease" (Circulation, February, 1981, Vol. 63, Page 243). The question that Bonow and his co-laborators raised was whether or not coronary bypass surgery should be performed in every case of aortic valve replacement – provided both diseases were present. In some of their cases, the authors elected to replace the aortic valve without performing a coronary artery bypass procedure unless the patient had a marked narrowing of the left main coronary artery and in patients with severe angina and mild valvular disease. Their work was performed at the National Institute of Health. They compared the results of surgery in 55 symptomatic patients of coronary artery disease and who had aortic valve replacement without coronary artery bypass surgery with the results obtained in 142 patients who had no coronary artery disease and who had surgery for aortic valvular replacement during the same period. They found that there was a 4% immediate operative mortality with patients with coronary artery disease; they found that there was a 5% operative mortality in patients who had no coronary artery disease. They further said that there was no significant difference in late survival between the two groups. They concluded that their data indicated, but did not prove, "that present operative detection of coronary artery disease does not necessitate coronary artery bypass surgery in all patients at the time of aortic valvular replacement." In the discussion of their article, Bonow, et al, state that in patients with aortic regurgitation, the function of the left ventricle seems to be a better prognostic sign than the presence or absence of coronary artery disease. He does state that this is not invariably true and is subject to considerable latitude in interpretation.

Bonow's, et al, article is followed in *Circulation* by an editorial written by J. W. Kirklin and N. T. Kouchoukos. Kirklin and Kouchoukos do not agree with Bonow, et al. They state that Bonow's, et al, conclusion that "coronary bypass grafting at the time of aortic valve replacement is not advantageous as a near-routine procedure for patients with combined important and aortic valve disease – is premature and unwarranted." This disagreement between some excellent cardiologists is bound to lead to further studies on this important topic.

In the same issue of *Circulation* is an excellent article by Massie, Ports, Chatterjee, Parmley, Ostland, O'Young, and Haughom entitled, "Long-Term Vasodilator Therapy for Heart Failure: Clinical Response and Its Relationship to Hemodynamic Measurements" (Circulation, Vol. 62, Page 269, February, 1981). It is well known that vasodilators are helpful in the treatment of congestive heart failure but there have been troublesome side effects. These authors treated 56 patients with oral hydralazine and nonparenteral nitrates for chronic, relatively stable heart failure.

At the end of three months of this treatment, 73% of Massie, et al's, cases stated that they felt they had improved symptomatically. Twenty-seven percent were unimproved symptomatically. Ten patients are said to have died in the initial six months under observation. It is of interest that 59% of the patients showed an improvement of at least one class in the N.Y.H.A. classification. The authors state that hemodynamic changes produced by long-term vasodilator therapy can persist. Massie, et al, found that there are some predictors of response to vasodilator therapy. If the patient clinically improves, this was an objective predictor.

Using hemodynamic measurements, patients with the worst cardiac function were said to be least likely to show a response to vasodilator therapy – high pulmonary artery pressure and high pulmonary capillary wedge pressure indicate cases that were not likely to respond well for vasodilator therapy. The authors speculated that larger doses of the same drug on some of the non-responders might have induced some beneficial effects. Because of the relatively benign nature of hydralazine and the nitrates, physicians who treat cardiac cases should familiarize themselves with this form of treatment.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The trace shaws the patient ta be in sinus rhythm at a rate of 63 beats per minute. First degree AV block is present with the PR interval exceeding 0.20 sec. The QRS duratian is greater than 0.12 sec. and a pattern of right bundle bronch black is present. Right axis deviotion is nated alang with a small R-wave in I ond a small Q-wave in III. This raises the question of left posterior fasicular black. Thus, the ECG yields evidence for trifasicular block with the cambination af first degree AV block, RBBB, and LPFB. A symptamatic patient with this much evidence af conductian disturbance is a gaad candidate far pacing.

"From Other Years"*

Journal of the Arkansas Medical Society
3(6):244-45 15 December, 1892

From: Jordan, A. C., "Report on State Medicine"

Dr. R. B. Christian, writing from Little Rock, under date of April 26, 1892, says:

"Last summer and fall the people of Little Rock and Pulaski county enjoyed very good health. There were no diseases of an epidemic or endemic character prevailing.

"The diseases with which we had to deal were principally of the usual variety, viz.: Malarial, remittents and intermittents, summer diarrhoea in children, and other troubles chiefly of a kindred character.

"During the summer months we had but very little excessively hot weather. Rains came along at short intervals, cooling and keeping humid to a certain extent the atmosphere, thus rendering the conditions of life favorable to the good health of the people.

"The cooling effects of frequent rains during the hot summer months upon the atmosphere is, in my opinion, very conducive to good health.

"During the winter months our city and county was visited, in common with other localities and sections, by la grippe. This disorder prevailed quite extensively, and was very severe in its attacks, especially did the old and feeble and those possessing a latent scrofulous or tuberculous habit succumb to its effects. When these classes were attacked, the disease was quite fatal, or if not fatal, its effects on the system lingered a long time.

"With the approach of spring the epidemic gradually passed away, and during the spring months, so far, there has been very little sickness.

"Improvements in the way of streets, sidewalks, sewers, etc., that have been going on in Little Rock for some time, have beyond a doubt conduced very much to the good health of the city.

"The therapeutic measures generally employed in the treatment of lagrippe consists principally of mercurials, quinine and the ammonias as curative agents, and as palliatives the various coal-tar derivatives were largely used. These latter remedies have, I believe, given very general satisfaction, especially when used for the relief of pain of a catarrhal origin."

*From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives.

MEDICINE IN THE NEWS



THE MONTH IN WASHINGTON

More than 150 physicians from across the nation, including the presidents of 36 state medical societies, have met in Washington, D. C., to map a final assault to convince Congress the Federal Trade Commission threatens the quality of medical care.

The state delegations and top officers of the American Medical Association called on scores of key Senators and Congressmen as voting time appeared to grow close on proposals to strip the FTC of jurisdiction over state-regulated professions and to impose a moratorium on FTC actions against professionals and their associations.

"We expect to win," declared James Sammons, M.D., Executive Vice President of the AMA. Dr. Sammons told a news conference that 220 members of the House, a majority, have endorsed the moratorium bill. And he noted that the Senate Commerce Committee approved 10-5 legislation to remove the FTC's powers over professionals. (Subsequent to the news conference, the Senate Appropriations Committee also approved a one-year suspension of the FTC's authority over physicians and other professionals by a 14 to 5 vote.)

The "chilling effects" of continued FTC jurisdiction over physicians was described to reporters by Joseph Boyle, M.D., Chairman of the AMA Board of Trustees. Peer review activities, hospital review committees, and specialty society standards could be jeopardized by FTC actions, Dr. Boyle said.

"The whole structure of medical society attempts to protect patients from incompetent physicians, from fraud and abuse, will be called into question and could collapse," Dr. Boyle warned.

John Coury, Jr., M.D., an AMA Board member, told the news reporters that local medical societies are afraid to warn the public against "certain entrepreneurs" who are hurting patients because the FTC might take action against the societies. "The FTC permits quacks to carry out false and misleading advertising in their practice, and permits the crumbling of the excellent peer review system in this country," said Dr. Coury.

If Congress allows the FTC to continue its "harassment," then Congress "must accept the responsibility for destroying peer review and the quality of medical care in this nation," the physician said.

The threat the FTC poses to the health care coalition movement was outlined at the news conference by Dennis O'Leary, M.D., acting medical director of the George Washington University Hospital and President-Elect of the Medical Society of the District of Columbia.

Dr. O'Leary said the agency appears to be "antithetical to the whole cost containment effort" embodied by the business-professional-public coalitions. "The FTC is all over us, like a rag," he said, noting that the agency's only go-ahead so far to such coalitions has been permission to publish data.

On the eve of the Congressional visits, Dr. Sammons appeared on the Public Broadcasting TV show MacNeil-Lehrer Report to debate James Miller, FTC Chairman.

Dr. Sammons said the FTC's ruling against the AMA in the case involving ethical codes on advertising "has made it virtually impossable for the profession to root out fraud and deception."

The AMA official pointed out that the Justice Department traditionally has had jurisdiction over the professions and that not until seven years ago did the FTC take action against professionals. "There has not been one scintilla of evidence that Congress intended for the FTC to enter this area."

Miller, a Reagan Administration appointment, told the PBS network audience the anti-FTC legislation would provide a privileged class under antitrust laws and would make the professions immune from laws against fraud and deception. He said many health and business groups as well as the Justice Department and most state attorneys general have opposed the legislation restricting the FTC's scope.

Dr. Sammons said it is "totally inaccurate" to suggest that the AMA is seeking to exempt physicians from the antitrust laws. He noted the Justice Department's long history of actions involving professionals in antitrust cases, including a historic case against the AMA in the early 1940's.

The FTC's recent presence in the field "is clearly expensive and duplicative," he said, "an intrusion into an arena that is the province of the Justice Department."

The agency has been carrying out "fishing expeditions" for records and documents that have cost medical organizations "incredible sums of money" to comply with, according to the AMA official. Dr. Sammons said the AMA spent seven years and $5 million in fighting the FTC's "needless" complaint against the AMA's ethical guides on advertising.

Some provisions of the FTC's ruling against the AMA would prevent the AMA and medical societies from being patients' advocates in fee disputes and hamper physicians' ability to police misleading advertising, he said.

The FTC isn't equipped to deal with professional ethical problems and insists on treating medical practices as if they were simple commerce, Dr. Sammons said.

"We're not selling widgets or electronic devices."

"There are strong implications of disruption of quality of care involved in the FTC's actions against the AMA," said Dr. Sammons.

At the news conference, Dr. Boyle told reporters the public needs to understand the repressive nature of FTC's authority over the professions. He cited the recent case of the Maine Medical Association which received a sudden order from the Boston office of the FTC to turn over within two weeks all documents relating to physician

reimbursement dating back five years. A request for a two-week extension to comply with the sweeping request was summarily refused. "That's what is going on today," Dr. Boyle said.

Since 1977, there have been 17 instances of FTC actions against medical societies and in only one — the case involving the AMA — has the case finally gone to court. In all others the FTC obtained consent decrees or dropped the actions.

Dr. Boyle noted that the California Medical Association, faced with an FTC action on relative value studies, spent $1 million on legal fees before deciding it could not afford to fight the case further and entered into a consent decree settlement. By contrast, in a similar case brought by the Justice Department against the Anesthesia Society, the case went to court and was won by the society at a total expense of less than one-third that borne by the California Association.

In the days following the press conference AMA President William Rial, M.D., in a letter to the *New York Times,* said the American people "do not want a federal bureaucracy interfering with the cost and quality of their personal medical care."

Dr. Rial noted that the AMA isn't seeking complete exemption from the antitrust laws for physicians, since the Justice Department would continue to oversee the antitrust statutes. "To add the FTC as a regulator and one more layer of government is not in the best interest of either physicians or patients," he said.

"We believe it is in the public interest . . . to leave regulation of professionals under courts of law and not to a duplicative and costly bureaucracy," Dr. Rial wrote.

Writing in the new USA TODAY newspaper, AMA Board Chairman Boyle said medical care in this country is the best in the world.

"This was achieved long before the FTC became involved; it has been endangered more than helped by FTC regulation," said Dr. Boyle.

The AMA officer said the FTC has paralyzed the staffs of medical societies with subpenas and requests for documents. State societies have been warned of antitrust implications in deciding physicians' qualifications, access to facilities, contracts with providers and disciplinary action against dishonest or incompetent physicians.

"Cost containment has been seen by the FTC as collusive price fixing," wrote Dr. Boyle.

In a letter to all Senators and Representatives, the AMA said "the FTC's intrusion into the regulation of professions forces the professions — those with expertise — to abandon desirable self-regulation because of the fear of an action by an over-zealous agency and the fear of financially debilitating litigation."

The lawmakers were told that Congress never granted the FTC authority to pursue the professions and that in 1977 Congress rejected an amendment that would have given FTC that authority.

* * * *

An extraordinary "lame duck" session of Congress has been requested by President Reagan to force the lawmakers to approve separate appropriations bills to keep the government operating this fiscal year.

The alternate likely would have been passage of a continuing resolution, a combined package which would carry more spending than Reagan wants and which would have been difficult to veto.

From the standpoint of health legislation, the President's action could mean less money for some health programs at the Health and Human Services Department. The extra session also brightened chances for passage of health measures still pending before Congress.

These include the controversial reauthorization of the Federal Trade Commission and the efforts of the professions to remove the agency's jurisdiction over them.

The Health Planning program is up for reauthorization. The issue to be settled is whether the program is killed outright or allowed to continue on a severely-reduced basis.

The authorization for the National Institutes of Health is another bill waiting for final action. The key debate here is on proposals to establish a new institute on arthritis.

Important drug bills are nearing final action. One would extend for seven years the patent-life of prescription drugs and another offers financial aid for production of orphan drugs.

Tougher labeling for cigarette packages and tougher and more uniform penalties for drunk driving are other health-related matters still before Congress.

In his message to Congress, Reagan said he feels strongly that "attempting to run the federal gov-

ernment without a proper budget — with a series of temporary continuing resolutions — and the associated overall budgetary uncertainty — amounts to both bad economics and bad management."

As the situation now stands, Congress will recess early in October and come back about November 29 to finish the money bills. Nothing precludes the lawmakers during the "lame duck" session from taking up other measures.

* * * *

A drastically-slashed health planning program has easily cleared the House, 302-14, but the final decision on the controversial program may not come until the lame duck session of Congress following the elections.

The bill authorizes $65 million in grants over two years for states that want funds for their planning programs. Under the measure, states could use the federal money only for certificate-of-need review for institutional health services costing more than $1 million or requiring a capital expenditure of more than $5 million.

Exempt from any certificate-of-need review would be health maintenance organization, free-standing physicians' offices, and equipment in independent clinical laboratories.

The Administration wanted to phase out planning this year, but the delay in submitting a pro-competition de-regulation bill bolstered arguments of pro-planners that the program should stay alive until something is put in its place.

The bill passed by the House was a compromise worked out between Reps. Henry Waxman (D-CA) and Edward Madigan (R-IL), the top members of the House Commerce Subcommittee on Health.

No planning bill has been reported by the Senate Labor and Human Resources Committee. There is a chance a one-year extension may be sought as an amendment to other legislation on the Senate floor. Final congressional action may not come until the extra session of Congress in November or December.

* * * *

The House has approved $317 million over three years for the federal government's programs to combat drug and alcohol abuse, some $100 million more than the Administration recommended.

The measure (H.R. 6458) mandates a new emphasis on prevention and beefs up research activities at the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse.

The bill was passed by voice vote.

In another vote, the House approved a two-year, $17 million reauthorization of funds for federal programs to foster research and health information and health promotion.

Meantime, both House and Senate are preparing to vote on reauthorization of the National Institutes of Health. The bills call for a modest increase in NIH funding. There is strong support in both chambers for establishing a new institute on arthritis.

In the confused, end-of-session rush to complete legislative work, the Senate Appropriations Committee approved a continuing resolution providing money to keep the HHS Department in business until the end of this year. The bill provides an increase of $210 million for NIH over last year's level, and denies HHS' proposal to cut by 10 percent indirect overhead costs to universities and medical schools. The bill provides $39 million for childhood immunization and $64 million for health planning.

* * * *

Publicity about serious Administration consideration of a highly-controversial means test for Medicare appears to have blown the plan out of the water.

HHS Secretary Richard Schweiker told Congress he personally opposes the idea and believes that he could prevail over the Office of Management and Budget (OMB) if it comes to a showdown. "I would feel pretty confident I can win this argument," Schweiker told a House Commerce Subcommittee.

The stories about a means test prompted Sen. Gary Hart (D-CO) and Rep. Peter Peyser (D-NY) to introduce a resolution warning the Administration that Congress considers a means test "a breach of faith with the American public . . ."

There is no question, however, that a means test to limit benefits available to older people with ample financial resources has been one of many cost-saving proposals being studied by the Administration.

* * * *

Physicians should advise pregnant women the safest course to protect the fetus from damage due to alcohol is to abstain from drinking, witnesses for the American Medical Association told Congress.

LeClair Bissell, M.D., a member of the AMA's Panel on Alcoholism, told the Senate Labor and Human Resources Subcommittee on Alcohol and Drug Abuse that "research clearly indicates that excessive use of alcohol during pregnancy can negatively affect the fetus."

Dr. Bissell said some research "suggests that even moderate use of alcohol" may be damaging.

In advising their patients, "physicians should be explicit in reinforcing the concept that, even with several aspects of the issues still in doubt, in view of the possibility of serious damage to the brain and body of the unborn the safest course is abstinence." Dr. Bissell noted that this policy was adopted by the AMA House of Delegates last June in connection with the adoption of a major report entitled "Fetal Effects of Maternal Alcohol use."

Jokichi Takamine, M. D., also a member of AMA's Panel on Alcoholism, said the AMA strongly supports public education efforts to increase public awareness on fetal effects of alcohol. A booklet on the subject is being prepared by the AMA. Dr. Takamine noted that the AMA supports a warning label on alcohol containers stating that alcohol "may be injurious to your health and, if consumed during pregnancy, to the health of unborn children."

* * * *

Tighter federal reimbursement standards for pacemaker costs appeared likely in the wake of three separate reports charging abuses and overpricing. All of the reports alleged or cited allegations that pacemakers have been over-prescribed due to high-pressure sales tactics and kickbacks to physicians from salesmen.

The latest report came from the staff of the Senate Aging Committee which concluded that "the necessity or appropriateness" of as much as half of the $2 billion cost of pacemaker procedures to Medicare "can be questioned."

Earlier reports along much the same lines have been issued by the Health Research Group associated with Ralph Nader, and the HHS Department's Inspector General Office. The FBI is conducting an investigation.

At a hearing by the Senate Aging Committee, Whitney McFarlin, Vice President of Pacing Systems Group Medtronic, Inc., a pacemaker manufacturer, defended the pricing system, declaring that "from the earliest years of the industry to the present, pacing has been a cost-effective treatment." He said a recent study of cardiac pacing costs "show that the total cost of treating the pacemaker patient dropped 43 percent from 1965 to 1980."

McFarlin said his company "deplores" questionable sales practices cited in the staff report and welcomes efforts to "bring about reforms in our industry."

The Senate staff study said "the key to the abuses . . . lies in the symbiotic relationship of the physicians and the pacemaker salesman" with "creative marketing devices" to encourage physicians to prescribe pacemakers.

Among such inducements mentioned in the report were stock options for consulting arrangements, payments of up to $25,000 for "clinical evaluations" of new products, cash payments for each pacemaker implanted, vacations, junkets and gifts.

Russell Chambers, President of Intermedics, Inc., another pacemaker manufacturer, told the Committee that the staff report was "replete with errors, misrepresentations and innuendoes." He said the cited costs of pacemakers to the makers does not include expenses relating to research and development, selling costs, interest on bank borrowings and "a variety of other general and administrative costs."

Brendan Phibbs, M.D., Chief of Medicine at Kino Hospital, Tucson, AZ, said studies have shown that from 10 to 80 percent of implants in Arizona may have been unnecessary. However, Seymour Furman, M.D., of Montefiore Hospital, New York City, questioned whether there was a significant percentage of unnecessary implant procedures.

Chambers said today's pacemakers last four times as long as earlier ones, meaning that the cost "has actually declined with advances in technology."

* * * *

The HHS Department is considering regulations that would ease substantially the numerous requirements hospitals must meet to comply with Medicare and Medicaid rules.

One of the provisions would broaden the term "physician" to include for purposes of the regulations dentists, optometrists, podiatrists, chiropodists and chiropractors.

Another change "would grant maximum flexibility to the hospital in granting privileges and organizing its staff. Nurse practitioners and nurse-midwives, for example, could be granted staff privileges."

Each hospital patient, under the draft proposal, would have to be under the care of a "physician." This is a stricter requirement than the present standard that hospitals have policies to assure that patients are under the care of a physician.

According to the proposal, the changes are "part of the Department's regulatory relief efforts . . . designed to reduce federal requirements, simplify and clarify regulations, and provide maximum flexibility in administration, while protecting patient health and safety."

When the new requirements are made public, they will be open for comment and recommendations from interested groups before being made final.

Many of the present requirements affecting hospital medical staff would be eliminated and replaced with a broad requirement that there be a well-organized medical staff accountable to the governing body and headed by an individual physician. Periodic appraisals of staff members would be another condition. Clinical privileges could be granted only to those legally and professionally qualified.

Current regulations spelling out what hospitals have to perform with their social service departments would be dropped. "There is no indication that direct risks to patient health or safety may result in the absence of federal standards."

Similar reasons are given for elimination of a medical library requirement for hospitals.

Education and experience requirements for hospital administrators are eliminated in the draft recommendation. All specific credential requirements for medical records personnel also would be cancelled.

New standards for radiology services make it clear that radiologists do not have to interpret or reinterpret every film and that the medical staff and the chief of radiological services may designate who is qualified to use radiological apparatus.

The new regulations would make a distinction between those laboratory services that can be directed by a laboratory specialist qualified by a doctorate degree and those laboratory services that by their nature must be under the direction of a physician.

Specific current references to adequate and safe facilities would be replaced with a general comprehensive statement, except for areas such as Nuclear Medicine services and radiologic services.

Rather than specifying credentials for many hospital personnel, the regulations "would frequently place the responsibility on the hospital for choosing its own staff and delineating staff responsibilities."

Mandatory committees and committee meetings of hospital staff would be eliminated as a specific requirement.

* * * *

The Administration has asked Congress to restrict sharply the insanity defense in federal cases.

The legislation sent to Capitol Hill by the Administration met a receptive audience. Many lawmakers have introduced bills on the insanity defense as a result of criticism of the verdict in the case of John Hinkley, Jr., for his assassination attempt on President Reagan.

The Administration proposal would limit insanity as a defense to cases where the defendant has no understanding of what he has done. In the words of Associate Attorney General Rudolph Giuliani, the defense would be applicable to "someone who had the mental age of a two-year-old or believed they were shooting at a tree when in fact they were shooting at a human being."

The controversy concerns the verdict of innocent by reason of insanity. The use of insanity as a mitigating factor in sentencing is not at issue. Many bills in Congress would restrict insanity to the "guilty but insane" defense.

In his message to Congress, President Reagan said the present rule "permits the introduction at trial of massive amounts of conflicting and irrelevant testimony by psychiatric experts, thereby complicating the trial process and deflecting the attention of the jury from the critical issues."

"A confusing swearing contest between the opposing psychiatrists," was how the President described the present testimony in cases where the sanity is an issue.

* * * *

ADDITIONS TO STAFF AT MEDICAL SCIENCES CAMPUS

The University of Arkansas for Medical Sciences has announced additions to the staff.

The Department of Medicine at the College of Medicine has announced that Dr. Jose A. L. Arruda will serve as director of the Division of Nephrology and that Dr. Joseph A. Franciosa will serve as director of the Division of Cardiovascular Medicine. Both will also serve as division chiefs at the Veterans Administration Medical Center. Dr. Arruda is a native of Brazil. He was associated with the University of Illinois Abraham Lincoln School of Medicine prior to joining the UAMS staff. Dr. Franciosa is a native Pennsylvanian whose medical degree was received from the University of Rome in Italy. He was associated with Georgetown University Medical School, the University of Minnesota Medical School and the Medical School of Pennsylvania prior to joining the UAMS staff.

J. Chrisley Hackler, Ph.D., will develop a permanent division in the College of Medicine, the Division of Medical Humanities. Development of the program will proceed in stages; in the fall of 1983 a basic instruction to biomedical ethics will be offered to all freshmen medical students.

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

STABILIZATION OF THE CRITICALLY ILL NEWBORN

Presented by Nancy H. Ceaser, M.D., Neonatologist and Director of Intensive Care Nursery, Lester E. Cox Medical Center, Springfield, Missouri, *January 18, 7:00 p.m.,* In-service Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

DYNAMICS OF HUMAN SELF-DESTRUCTIVE BEHAVIOR

Presented by Vann Arthur Smith, M.D., Ph.D., Director, Midwest Suicide Information Association, Libertyville, Illinois, *February 15, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

DRUG INTERACTION/OLD AND YOUNG

Presented by the Department of Medical Education, Baptist Medical Center, *February 19, 8:00 a.m. to 12:30 p.m.,* BMC Auditorium, Little Rock. Four hours Category I credit. Registration fee $40.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-SOUTH ARKANSAS

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, fourth Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conferences, first and second Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, January 8, 22, and February 5, 19, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

FAYETTEVILLE — VA MEDICAL CENTER

Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, February, Dr. Charles Hiller, Pulmonary.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-NORTHEAST

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Craighead Memorial CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, January 12, 26 and February 9, 23, 8:15 a.m., Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category 1 credit.
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
General Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #3.
Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., Doctors Hospital.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S1169 Laboratory.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

PINE BLUFF — AHEC

Family Practice Interesting Case Conference, each Monday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
OB/GYN Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Family Practice Residents' Conference, first, fourth and fifth Tuesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.
Behavioral Sciences Conference, each Thursday, 1:30 p.m., Jefferson Regional Medical Center, Classroom B.
Chest Conference, first and third Friday, 12:30 p.m., Jefferson Regional Medical Center, Classroom B.

Southeast Arkansas Medical Lecture Series, fourth Tuesday, 7:00 p.m., Colonial Steak House or Rosswood Country Club, Pine Bluff.

TEXARKANA — AHEC-SOUTHWEST
AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, January 19, 12:30 p.m., St. Michael Hospital.



PERSONAL AND NEWS ITEMS

DR. NETTLESHIP SPEAKS

Dr. Mae Nettleship of Fayetteville discussed "A Physician Looks at Nuclear War" at a Unitarian-Universalist meeting in the Fellowship House. Dr. Nettleship is a member of Peace Links World Wide.

DR. SLOAN LOCATES

Dr. Fredric J. Sloan, an Ophthalmologist, has opened an office in the White River Medical Arts Building in Batesville.

DR. McDOUGAL

Dr. Richard McDougal has opened an office at 201 Rogers Avenue in Clarksville. Dr. McDougal specializes in Ophthalmology.

DR. BULLOCH OPENS OFFICE

Dr. Robert T. Bulloch has opened an office at the Calhoun County Hospital in Hampton.

MEMPHIS SURGEON SPEAKS

Dr. Leonard Hines, a general surgeon of Memphis, presented a program on peripheral vascular diseases at the Piggott Community Hospital.

DR. BURKS PROMOTED

Dr. Willard G. Burks of Wynne has been promoted to the rank of Brigadier General of the Arkansas Army National Guard.

DR. POLLMAN IN GENTRY

Dr. Stanley E. Pollman has joined Dr. Robert H. Weaver at the Gentry Health Center.

DR. SETON IN WILSON

The Osceola Memorial Hospital Professional Building at Wilson was recently dedicated by Governor White. Dr. Margaret Seton will staff the facility.

DR. FARRIS APPOINTED

Dr. Guy Farris of Little Rock has been appointed to the Long Term Care Facility Advisory Board for the State of Arkansas.

DRS. IRWIN AND LANDRUM

Dr. Peter Irwin of Fort Smith, chairman of the Arkansas Committee on Trauma, and Dr. Sam Landrum of Fort Smith, secretary-treasurer of the Arkansas Trauma Society, participated in a public symposium on life-saving techniques at Westark Community College.

STADIUM MEDICAL TEAM

Dr. Steve Venable of Little Rock is medical coordinator for Razorback games at War Memorial Stadium. Dr. Marvin Leibovitch of Little Rock is a member of the stadium team.

NEW CLINIC IN ROGERS

Drs. Richard Pearson, James H. Bledsoe, Mario E. Costaldi, and Frank J. Panettiere hosted an open house at their new surgery and oncology clinic at 6 Halsted Circle in Rogers.

DR. BIONDO HONORED

Dr. Raymond Biondo of North Little Rock recently received from the White House the President's Volunteer Service Award.

DR. POFF CHIEF

Dr. Nathan Poff of Heber Springs is the newly elected chief of staff of the Cleburne County Hospital. Dr. Steve Blackburn is outgoing chief of staff. Dr. W. James Ashabranner was elected vice chief of staff and Dr. Harold Beasley is secretary.

SPORTS MEDICINE

An offensive lineman for the Dallas Cowboys recently traveled to Fayetteville for Orthopaedic surgery by Dr. James Arnold. Dr. Arnold's orthopaedic group, which includes Drs. Tom Coker, John Park and W. D. Harris, has perfected what they call a "Modified McIntosh" surgical procedure. Dr. Arnold serves on the National Football League Players Association Board in monitoring injuries.

DR. COHAGAN LOCATES

Dr. D. L. Cohagan has joined the Bentonville Medical Clinic for the practice of General Medicine.

DR. SMITH SPEAKS

Dr. Paul Smith of Pine Bluff spoke on "Resuscitation on Newborn" during a lecture series at the University of Arkansas at Pine Bluff.

DR. ASHLEY OPENS OFFICE

Dr. Janis E. Ashley, a Pediatrician, has opened an office at 1925 Green Acres Road in Fayetteville.

DR. ROSS RETIRES

Dr. Robert W. Ross of Little Rock has announced his retirement from the practice of medicine effective December 31st.

DR. BELL

Dr. Robert S. Bell has joined Dr. Ernest R. Hartmann for the practice of Orthopaedic Surgery at 619 West Grove in El Dorado.

DR. MOORE CHIEF

Dr. Arthur F. Moore of Fayetteville is chief of staff at Fayetteville City Hospital. Dr. Joe Rouse of Fayetteville served as chief for the previous two years.

DR. WRIGHT

Dr. Larry D. Wright has joined the Rogers Diagnostic Clinic, P.A., at 1019 West Cypress, for the practice of Internal Medicine.

DRS. BAILEY AND PAPPAS

Drs. H. A. Ted Bailey, Jr., and James A. Pappas of Little Rock presented an exhibit, "Small Fenestra Stapedectomy Technique," at the 1982 annual meeting of the American Academy of Otolaryngology — Head and Neck Surgery. They received the President's Award for their presentation.

Dr. Bailey served on a panel program at the Otosclerosis Study Gronp Meeting and, with Dr. Pappas, presented "Within Clinic Hearing Aid Dispensing." Dr. Pappas was an instructor for a course on "Outpatient Surgery."

DR. MIZELL LOCATES

Dr. Philip L. Mizell has joined Psychiatry Consultants at 500 South University in Little Rock.

DOCTORS MOVE

Drs. F. Hampton Roy, Robert L. Berry and James R. McNair have relocated to 1000 Medical Towers Building in Little Rock.

DR. SANZENBACHER

Dr. Larry Sanzenbacher, a General Surgeon, has located in Siloam Springs. Dr. Sanzenbacher came to Arkansas from Colorado.

DRUG PROGRAM

Members of the medical profession in Osceola sponsored a program, "The Impact of Drug Culture on Youth: What Your Community Can Do," for the Osceola general public. Speaker was Dr. Thomas J. Gleaton, Jr.

PHYSICIANS RECERTIFIED

The American Board of Family Practice has recertified Drs. R. H. Nunnally of Camden, John C. Dobbs of Conway, and Edward P. Hammons of Forrest City.

RECTOR CLINIC

The Rector Medical Clinic held an open house in late September. The clinic is staffed by Dr. Roger Cagle and Dr. Len Kemp.

DR. QUEVILLON

Dr. Robert Quevillon, an internist, will join the staff of the Lawrence Memorial Hospital in Walnut Ridge in December.

DR. CAGLE COURSE DIRECTOR

Dr. Roger Cagle of Paragould was director for an advanced life support provider course conducted recently at Arkansas Methodist Hospital.

DR. ROWE LOCATES

Dr. Daniel S. Rowe, an Internist, has opened an office at 600 Main Street in Hot Springs.

DR. WEATHERS APPOINTED

Dr. Larry Weathers of Searcy has been appointed to the Board of Directors of the Arkansas Affiliate of the American Heart Association.

LEWISVILLE PHYSICIANS

Dr. Robert C. Patton, a native of Lewisville, and Dr. John V. DeFazio, Jr., formerly of Hamilton, Ohio, have opened a Family Practice Clinic in Lewisville.

DR. EANS RELOCATES

Dr. Thomas Eans of Heber Springs has entered solo practice at 1709 West Main. He is a family physician.

DR. ENNS SPEAKS

Dr. Wayne P. Enns of Paris spoke at a meeting of the Paris Business and Professional Women on funding of county ambulance services.

DR. BARCLAY CHAIRMAN

Dr. David Barclay of Little Rock is the new chairman of the Arkansas Section of the American College of Obstetricians and Gynecologists. Dr. Mose Smith III of Little Rock is vice chairman.

DR. WILSON SPEAKS

Dr. M. Carolyn Wilson was guest speaker at a meeting of Friends of Hospice in Mountain Home.

DR. SMITH ELECTED

Dr. Bernard C. Smith of Bradford has been elected to the Board of Directors of the Citizens State Bank in Bald Knob.

DR. HARDIN PRESIDENT

Dr. Philip R. Hardin of Mountain Home has been named president of the Arkansas Dermatologic Society.

DR. HENRY SPEAKS

Dr. Morriss Henry of Fayetteville was keynote speaker at a seminar on "60+: Where Do You Turn?" Dr. Henry discussed current legislation affecting the elderly.

DR. McCRARY HONORED

Dr. George A. McCrary of Jacksonville was honored as "Boss of the Year" by the Pulaski County Medical Assistants Society.

DR. SALTZMAN SPEAKS

Dr. Ben Saltzman, director of the Arkansas State Health Department, spoke at the formal opening of the Boone County Health Unit.

DR. WILSON LOCATES

Dr. William C. Wilson has opened his office in Hot Springs for General Medicine Practice.

DR. JANES ELECTED

Dr. Robert Janes of Fort Smith has been elected to the board of Directors of the American Cancer Society.



NEW MEMBERS

DR. EDWARD A. GRESHAM

Dr. Gresham, a native of Crossett, is a new member of the Ashley County Medical Society.

Dr. Gresham is a 1975 graduate of Hendrix College at Conway and a 1979 graduate of the University of Arkansas College of Medicine. His internship and Family Practice residency were with the University.

Dr. Gresham began practicing Family Medicine in Crossett in July. His office is located at 310 North Alabama.

DR. MICHAEL SMITH

Dr. Smith has joined the Craighead-Poinsett County Medical Society. He was born in Louisville, Kentucky.

Dr. Smith was graduated from John Carroll University of Cleveland in 1970. He was graduated from the University of Kentucky College of Medicine in 1974. His intern and Surgery residency training were with the Naval Regional Medical Center in Portsmouth, Virginia. He was a staff surgeon at the Naval Hospital in Beaufort, South Carolina. He is certified by the American Board of Surgery. He is a member of the Candidate group of the American College of Surgeons.

Dr. Smith specializes in General, Vascular and Thoracic Surgery. His office is at 826 South Main in Jonesboro.

DR. JAMES MARK MYERS

A new member of the Pope County Medical Society, Dr. Myers specializes in General and Vascular Surgery.

Dr. Myers was born in Bartlesville, Oklahoma. His pre-med education was with the University of Arkansas. He is a 1974 graduate of the University of Oklahoma College of Medicine in Oklahoma City. Dr. Myers served his internship and residency with Baptist Memorial Hospital in Memphis. He practiced in Poplar Bluff, Missouri, for three years.

Dr. Myers is a Board Certified Surgeon. He is associated with Millard-Henry Clinic at 3105 West Main Place in Russellville.

DR. T. DAVID I. WILKES

Dr. Wilkes is a new member of the Pulaski County Medical Society. He is a native of Little Rock.

Dr. Wilkes received a B.S. in Zoology from the University of Arkansas in Fayetteville in 1972. He was graduated from the University of Arkansas College of Medicine in 1976. Dr. Wilkes received

Ophthalmology training at the University from 1976 to 1980. He served an Ophthalmic Plastic and Reconstructive Surgery Fellowship at the University of Arizona Medical School in Tucson. He is board certified in Ophthalmology.

Dr. Wilkes is an Assistant Professor of Ophthalmology and Director of Ophthalmic Plastic and Reconstructive Surgery at the University of Arkansas College of Medicine.

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The St. Francis County Medical Society has two new members:

DR. CHARLES L. BARKER

Dr. Barker, a native of Murfreesboro, Tennessee, received his B.S. and M.S. degrees from the Middle Tennessee State University in Murfreesboro. He received a Ph.D. degree from Baylor University in 1973 and was graduated from the University of Tennessee Center for Health Sciences in 1978. Dr. Barker served his internship at the City of Memphis Hospital and his Obstetrics-Gynecology residency at the University of Tennessee. He served as Clinical Instructor with the Department of Obstetrics and Gynecology of the University of Tennessee.

Dr. Barker specializes in Obstetrics and Gynecology. His office is located at 1712 Lindauer Road in Forrest City.

DR. JAMES P. DeROSSITT, III

Dr. DeRossitt was born in Memphis. He received a B.A. degree from the University of Arkansas in 1969. From 1969 to 1972, he served with the United States Air Force. In 1974, Dr. DeRossitt received a B.S. from the University of Arkansas at Little Rock. He is a 1978 graduate of the University of Arkansas College of Medicine.

Dr. DeRossitt received his internship and Obstetric-Gynecology residency training at the City of Memphis Hospital, Tennessee, from 1978 to 1982. He has held the position of clinical instructor with the Department of Obstetrics-Gynecology at the University of Tennessee.

Dr. DeRossitt, an Obstetrician-Gynecologist, practices at 1712 Lindauer Road in Forrest City.

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The Sebastian County Medical Society has added two members to its roll:

DR. MIKE BERUMEN

Dr. Berumen, a native of Salt Lake City, Utah, is a 1967 graduate of the University of Texas at Austin. From 1967 to 1971, he was a Meterologist in the United States Air Force. Dr. Berumen was graduated from the University of Texas Medical School at Houston in 1977. After an internship at St. Francis Hospital in Beech Grove, Indiana, he served his Obstetric-Gynecology residency with Akron City Hospital, Ohio.

Dr. Berumen joined Cooper Clinic in Fort Smith in July of 1981. His mailing address is Post Office Box 3528, Fort Smith.

DR. TERRALD J. SMITH

Dr. Smith, a native of Hinton, Oklahoma, is an Assistant Professor with the Area Health Education Center.

Dr. Smith served as a combat medic with the United States Army in 1968 and 1969.

In 1973, Dr. Smith received a B.S. from Central State University in Edmond, Oklahoma; he received an M.S. degree from the Oklahoma State University at Stillwater in 1975. He is a 1979 graduate of the University of Oklahoma College of Medicine, Oklahoma City.

Dr. Smith received his Family Practice training at the AHEC in Fort Smith. He is associated with AHEC at 100 South 14th in Fort Smith.

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Washington County Medical Society has two new members:

DR. JOHN H. KENDRICK

Dr. Kendrick was born in Fayetteville. He received B.S. and M.S. degrees in Chemical Engineering from the University of Arkansas at Fayetteville.

During 1972, Dr. Kendrick served with the United States Army Chemical Corps. He also served with the 365th Civil Affairs Group of the Army Reserve.

Dr. Kendrick was graduated from the University of Arkansas College of Medicine in 1977. His internship and residency training were with the University.

Dr. Kendrick specializes in General Surgery. His office is at 504 West Emma in Springdale.

DR. HOWARD L. TICE

Dr. Tice, a native of Pierre, South Dakota, specializes in Gastroenterology. His office is located at 100-A East Poplar in Fayetteville.

Dr. Tice is a 1973 graduate of the University of South Dakota and a 1977 graduate of the University of South Dakota School of Medicine. His internship, Internal Medicine residency and Gastroenterology Fellowship were with George Washington University in Washington, D. C. Dr. Tice is board certified in Internal Medicine.

OBITUARY

DR. RICHARD M. LOGUE

Dr. Richard M. Logue of Little Rock died November 7, 1982. He was born in Schinnston, West Virginia, on April 22, 1916.

Dr. Logue, a 1942 graduate of the Kansas University College of Medicine, was a fellow of the American Academy of Orthopaedic Surgery, a clinical instructor of Orthopaedics at the University of Arkansas College of Medicine, and chairman of the Medical Society Professional Relations Committee. Dr. Logue had served as Chief of Orthopaedics at St. Vincent Infirmary twice, was past president of the Mid-Central Orthopaedic Society and the Arkansas Orthopaedic Society.

During World War II, Dr. Logue served in the Army Medical Corps. In 1964, he served with the CARE Medical Program in the Holy Lands and in 1972 with CARE Medico in the Dominican Republic.

Dr. Logue practiced Orthopaedics in Little Rock from 1948 until his death.

Dr. Logue is survived by his wife, Edmonda Mercer Logue, two sons and two daughters.

DR. L. A. WHITTAKER

Dr. L. A. Whittaker of Fort Smith died November 7, 1982. He was born November 30, 1913, in Van Buren.

In 1938, Dr. Whittaker was graduated from the University of Arkansas College of Medicine. His post graduate work was with St. Joseph Hospital in St. Paul, Minnesota; Piedmont Hospital in Atlanta, Georgia; and St. Edward Mercy Medical Center in Fort Smith.

Dr. Whittaker served with the 831st Engineer Battalion in the United States Air Force during World War II. He was in General Practice in Fort Smith from 1946 until 1969. From 1969 to 1979 he was director of the Sebastian County Department of Public Health.

Dr. Whittaker was president of the Sebastian County Medical Society in 1950; president of the Arkansas Academy of General Practice, 1960-61; and president of the Arkansas Medical Society, 1966-67.

He is survived by his wife, Mary Jane Whittaker, and two daughters.

RESOLUTIONS

DR. L. A. WHITTAKER

WHEREAS, God in His infinite mercy has seen fit to call from our midst on the seventh day of November 1982, Dr. Louie A. Whittaker, and

WHEREAS, Dr. Whittaker has faithfully served his patients in the community at large throughout his entire medical career, and

WHEREAS, Dr. Whittaker, during his years of practice has reflected the highest ideals of his profession, and

WHEREAS, in his devotion to family, church and friends, he exemplified the best in man, and

WHEREAS, the Sebastian County Medical Society mourns his loss

THEREFORE, BE IT RESOLVED, that the Sebastian County Medical Society, in its regular meeting on November 9, 1982, hereby adopts these Resolutions and directs that a copy be spread on the Minutes of the Society and that a copy be furnished the family and that a copy be published in the *Journal of the Arkansas Medical Society*.

Morton Wilson, M.D.
President
Sebastian County Medical Society

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DR. WILLIAM F. ADAMS

WHEREAS, God in His infinite mercy has seen fit to call from our midst on the seventh day of August 1982, Dr. William F. Adams, and

WHEREAS, Dr. Adams has faithfully served his patients in the community at large throughout his entire medical career, and

WHEREAS, in his devotion to family, church and friends, he exemplified the best in man, and

WHEREAS, the Sebastian County Medical Society mourns his loss

THEREFORE, BE IT RESOLVED, by the Sebastian County Medical Society, in its regular meeting on November 9, 1982, hereby adopts these Resolutions and directs that a copy be spread on the Minutes of the Society and that a copy be furnished the family and that a copy be published in the *Journal of the Arkansas Medical Society*.

Morton Wilson, M.D.
President
Sebastian County Medical Society

THINGS TO COME

March 5-12

Twenty-second Annual Meeting, Canadian-American Medical-Dental Association. The Lodge, Vail, Colorado. For additional information on the professional program, social functions, spouses' participation, please write to H. Robert Allott, M.D., Secretary-Treasurer, Box 116, Sault Ste. Marie, Michigan 49783.

March 25-26

Arkansas Chapter, American College of Surgeons Spring Meeting. Arlington Hotel, Hot Springs. For further information, contact Dr. Samuel Landrum, Chapter Secretary, 522 South 16th, Fort Smith 72901; phone 785-4181.

May 5-8

107th Annual Session, Arkansas Medical Society. "Old and New — A Delicate Blend." Hilton Hotel, Fayetteville. For further information, contact Leah Richmond at headquarters office in Fort Smith.



ARKANSAS MEDICAL SOCIETY AUXILIARY FALL BOARD MEETING MINUTES

The Fall Board meeting of the Arkansas Medical Society Auxiliary was called to order at 10:05 a.m. on September 14, 1982, by the president, Mrs. Herbert Taylor. The meeting was held in the Cosmetic Surgery Clinic at Little Rock.

Mrs. Frank Morgan gave the invocation.

The Auxiliary Pledge was led by Mrs. Ralph Izard of Saline County.

The roll call of board members was answered by 31 auxilians.

Minutes of the post-convention board meeting were read by the secretary, Mrs. Sam Koenig, and were approved as read.

Mrs. Taylor reported that the 1981-82 Minutes and Reports are available for board members and counties. She reported that she attended the American Medical Association Auxiliary Convention in Chicago along with Joann Cornell, Pulaski County; Donna Crenshaw, Jefferson County; Sarah Meredith, Bowie-Miller County. Mrs. Taylor distributed by-law changes adopted by the Annual Convention. Confluence delegates in addition to Mrs. Taylor will be State President-elect Mrs. Cornell; Saline County President-elect, Mrs. Ralph Izard; Pope County President-elect, Mrs. James Kolb; and Garland County President-elect, Mrs. John Bond. Confluence will be October 9-13.

Mrs. Taylor distributed changes for the State Directory. Barbara Singleton will be the convention chairman. The dates of the Annual Medical Society Convention have been changed to May 5-8, 1983, to be held at the Hilton Hotel in Fayetteville.

President-elect Mrs. Paul Cornell reported that membership packets are available and that each county president should take them to their membership chairmen. She also reported on a newly organized auxiliary in Baxter County.

Mrs. James Gardner, treasurer, reported as follows:

I. General Fund	
Beginning Balance	$ 242.09
Receipts	7,901.00
Total	$ 8,143.09
Disbursements	4,841.18
Balance	$ 3,301.91
II. Passbook Savings Account #9020-962-8	$ 626.93
III. Certificate of Deposit #718613	$10,000.00
Issued March 31, 1982	
Due September 28, 1982	
Certificate of Deposit #710030	6,746.75
30 months at 15.95%	
Brooksher Loan Fund	2,140.30
Ilse Oates Loan Fund	8,546.05
Martha Harding Gann Loan Fund	3,965.50
IV. Total Assets	$35,327.44

Historian/Archivist Helen Padberg reminded everyone to please send all newspaper articles to her or Margaret Ann Morgan.

ARK-MAP Chairman Sheila Taylor urged all county auxiliaries to send information about their organizations to her. She encouraged that pictures be sent also.

Membership-at-Large Chairman Judy McGuire reported that 395 letters had been mailed to Society spouses living in counties with no organized auxiliary.

Research Committee Chairman Sara Jouett reported that the committee has met four times. They researched 17 states concerning dues, membership, and by-laws. There were only two states that did not offer an option of membership, meaning that the county or member-at-large auxiliary member would pay state dues but were then given the option of paying National dues. Mrs. Jouett said that her committee was united in its intent to present a fair, honorable and attentive view to the need for change in a constructive manner, with their focus on the best interest of the Arkansas State Medical Auxiliary. Therefore she moved that the following recommendations be approved:

Each dues paying member of a component auxiliary shall pay dues to the Arkansas State Medical Society Auxiliary and the American Medical Association Auxiliary.

With three exceptions:

1. At the discretion of the component Auxiliary, spouses of deceased physicians may be exempt from paying State and National dues.
2. At the discretion of the component Auxiliary, spouses of physicians who are not members of the American Medical Association may be exempt from paying National dues.
3. At the discretion of the Membership Committee, Members-at-Large, who are spouses of deceased physicians and spouses of physicians who are not members of the American Medical Association may be exempt from paying National dues.

The motion was approved (with one negative vote).

By-laws Chairman Mrs. Jean Bradburn explained that because of the election year, Ark-Pac is now active. Auxilians have in the past been told that they could not have funds solicited from them. In that there has been some concern as to whether or not the By-laws of the AMS Auxiliary technically allow it to be an "affiliated organization" to the Arkansas Medical Society under the rules and regulations of the Federal Election Commission. Michael W. Mitchell of Cearley, Gitchel, Mitchell, and Roachell, attorneys for the Society, suggested the following amendments to our By-laws:

1. Article XII, Section 1, be amended to read as follows:
 The policies and objects of this Auxiliary shall be consistent with those of the American Medical Association Auxiliary of which it is a constituent. It shall be advised concerning its activities by the American Medical Association Auxiliary; it shall be *governed* in all of its activities by the Advisory Committee appointed by the President of the Arkansas Medical Society.
2. Article XII, Section 8, should read:
 Plans for cooperation with other organizations shall be cleared with component Medical Society Advisors in advance. *The Auxiliary may not be represented on Boards or other organizations nor affiliated with other organizations without the approval of the Advisory Committee of the Arkansas Medical Society.*
3. Article XIV Amendments:
 3. *The proposed amendment has been first approved by the Advisory Committee of the Arkansas Medical Society.*

Mary Jo Mizell moved that we accept the changes in our by-laws as recommended by the Society's attorney. The motion was seconded and passed.

The parliamentarian, Mrs. Harold Langston, reminded that a copy of the proposed by-law changes must be sent to the general membership 60 days prior to voting on them.

Communication Chairmen Esther Lopez and Irma Dudley distributed forms to be sent in to them each month by each of the county auxiliaries.

Legislation Chairman Donna Crenshaw announced that she has written to each of our Congressmen asking for their support in critical legislation affecting physicians. She asked that each county give her the names of their legislation chairman.

Brooksher Loan Fund Chairman Eulalia Araoz reported that at present there are fifteen students in the loan program. Eight of the students owe a balance of $6,297.02; seven of the students owe $3,800.00; the cash balance of the fund is $2,480.30. This brings the total value of the fund to $12,-577.32. Mrs. Araoz thanked the committee who formulated a new loan application form.

Cookbook Chairmen Mrs. Gwen Pappas and Mrs. Nikki Lawson reported that recipes had been sent out to county auxiliaries along with a questionnaire over the summer. They still need many more recipes. They also reported that they have contacted three printing companies who deal specifically with cookbooks. After much discusion concerning finances, marketing costs, and general interest in the project, Mrs. Sara Jouett

moved that the Cookbook Committee meet with the Executive Committee, the Finance Committee and printing representatives. The motion was seconded and passed.

Mary Jo Mizell, Finance chairman, reported that the Finance Committee met in Hot Springs in May to wind up the bills and reimbursements to committee chairmen for expenses and to close the books for the fiscal year 1981-82. She reported that a letter was sent out to all county presidents and the chairman of the Members-at-Large, dated June 17, stating the increase in dues effective July 1, 1982, and explaining the need for it. She announced that the Finance Committee has worked on revising the Finance Rules and expects to present them for approval at the Mid-Winter Board Meeting. Mrs. Mizell reported that our Money Market Certificate, issued by Worthen Bank in March at a rate of 13.492% interest per annum, is to mature September 28. Mrs. Mary Gardner moved that we re-invest the $10,000 Money Market Certificate which will then come due in March. The motion was seconded and passed.

The Health Projects chairman, Sylvia Kolb, reported that 760 projects were stored at National and are available to all counties.

Mrs. Taylor announced that the Arkansas Medical Society Auxiliary has been approached about helping sponsor and organize a major health education project for Arkansas schools. She met with Dr. Ben Saltzman of the Arkansas Department of Health, Dr. Bob Benefield of Blue Cross and Blue Shield, and Dr. Arvil Burks of the University of Central Arkansas who presented the idea. The program as proposed is based on a sequential health curriculum geared for grades K-7 known as the Berkley model. This program hopes to help counter negative health behavior patterns, especially among our young, and establish life-long skills in selecting, adopting, and sustaining healthful life practices. Mrs. Carlyn Langston moved that the Auxiliary pursue this project. The motion was seconded and passed.

Ann Chudy announced enthusiasm about the new group of Resident Physician/Medical Student Spouses.

Reporting for the Southern Medical Association Auxiliary, Margaret Ann Morgan announced that there are 49 new members from Arkansas.

AMS-PAC Liaison, Margaret Harris, announced that a questionnaire had been sent out to physicians concerning the use of their money during this election year.

AMA-ERF Chairman Sara Meredith reported that her committee had met with Dean Bruce who explained the use of AMA-ERF funds. She said that a slide presentation about AMA-ERF is available to all county auxiliaries for their use.

Mrs. Taylor commented that the progress report on our Tax Exempt Status will be available by the January Board Meeting.

Mrs. Willie Oates, at the request of Betty Bumpers, announced that on October 10 there will be a peace-related activity in the state.

After brief reports by county presidents, lunch was served. This was followed by a program on "Community Involvement in Parenting" given by Ginny Heiple of the Parent Center.

The meeting was adjourned at 1:15 p.m.

Amalie Koenig, *Secretary*

PHYSICIANS' DIRECTORY

CENTRAL CLINIC FOR WOMEN, P.A.

Suite 800, Medical Towers Building
9600 West Twelfth Street Little Rock, Arkansas 72205
Telephone 277-5885

C. E. PHILLIPS, M.D. C. ALLEN McKNIGHT, M.D., F.A.C.O.G.

*Melvin R. McCaskill, M.D. *D. B. Allen, M.D. *Francisco Batres, M.D.
*C. Dudley Rodgers, M.D. *K. David McKelvey, M.D. Kemp Skokos, M.D.

*DIPLOMATES, AMERICAN BOARD OF OBSTETRICS & GYNECOLOGY

THE WOMAN'S CLINIC, P.A.

Suite 414, Doctors Building OBSTETRICS & GYNECOLOGY Phone: 664-4131
500 South University INFERTILITY MICROSURGERY LASER CONIZATION Little Rock, Arkansas

GARY P. WOOD, M.D.

GYNECOLOGY AND INFERTILITY

LAPAROSCOPY — HYSTEROSCOPY — MICROSURGERY

Suite 314, Doctors Building Phone: 664-6127
500 South University Little Rock, Arkansas 72205

D. RICHARD JOHNSON, M.D.
MICHEAL L. SELBY, M.D.
ROBERT P. YOUNG, M.D.

Obstetrics and Gynecology

Suite 611, Doctors Building
500 South University 664-8003 Little Rock, Arkansas

DAVID L. BARCLAY, M.D., P.A.

Gynecology and Gynecologic Oncology
David L. Barclay, M.D., FACOG, FACS
Diplomate, American Board of Obstetrics and Gynecology
Certified, Sub-Specialty, Gynecologic Oncology

Suite 614 — 500 South University Avenue Office: (501) 664-8502
Little Rock, Arkansas 72205 Exchange: 664-3402

William E. Harrison, M.D.

OBSTETRICS AND GYNECOLOGY

Doctors Building 500 South University
Suite 711 Phone 664-9232 Little Rock, Ark. 72205

CHARLES REID HENRY, JR., M.D.

Obstetrics/Gynecology

Suite 702
500 South University 664-4191 Little Rock, AR 72205

CORNERSTONE CLINIC FOR WOMEN

DRS. SIMMONS, KWEE, SMITH, STUDDARD & TANNER
PROFESSIONAL ASSOCIATION

OBSTETRICS AND GYNECOLOGY

*ORMAN W. SIMMONS, M.D. *JAMES J. KWEE, M.D. *DOUGLAS B. SMITH, M.D.
*JAMES D. STUDDARD, M.D. JAMES A. TANNER, M.D.

*Diplomate, American Board of Obstetrics & Gynecology

#1 Lile Court, Little Rock, Arkansas 72205
(across from new Baptist Medical Center)
Telephone 501-224-5500

ARKANSAS MEDICAL SOCIETY
MEMBERSHIP ROSTER
December 1, 1982



HEADQUARTERS OFFICE:
214 NORTH 12TH STREET
POST OFFICE BOX 1208
FORT SMITH, ARKANSAS 72902
TELEPHONE: 501 782-8218

MEMBERSHIP ROSTER OF THE ARKANSAS MEDICAL SOCIETY 1982-1983

Type of Practice	Member's Name	Address	Telephone Number
		ARKANSAS COUNTY	
FP	Burleson, Stan W	Post Office Box 369, DeWitt 72042	946-1326
GP	Cross, Joseph E.	Post Office Box 472, DeWitt 72042	946-1676
FP	Daniel, Noble B	Route 1, Box 21-D, Stuttgart 72160	673-7211
FP	Guyer, G L.	Route 1, Box 21-D, Stuttgart 72160	673-7211
FP	Hestir, John M.	Post Office Drawer 512, DeWitt 72042	946-3637
FP	John, Milton C.	Route 1, Box 21-D, Stuttgart 72160	673-7211
FP	Malloy, Mark J.	Route 1, Box 21-D, Stuttgart 72160	673-7211
GS	Millar, Paul H.	Route 1, Box 21-D, Stuttgart 72160	673-7211
FP	Morgan, Jerry D	Route 1, Box 21-D, Stuttgart 72160	673-7211
GP	McCracken, Elbert A	509 South Main, Stuttgart 72160	673-8571
FP	Northcutt, Carl E.	Route 1, Box 21-D, Stuttgart 72160	673-7211
FP	Pritchard, Jack L.	1022 South Main, Stuttgart 72160	673-2331
GP	Rasco, C W , Jr.	111 South Jackson, DeWitt 72042	946-3156
FP	Speer, Hoy B , Jr.	1814 North Henderson, Stuttgart 72160	673-2586
R	Speer, Marolyn N	Rt 1, Box 21-C, Stuttgart 72160	673-3511
		ASHLEY COUNTY	
	Bui, Thieu	Austin, Texas	
GP	Cothern, William R.	Post Office Box 577, Crossett 71635	364-6111
	Edwards, Lawrence E.	Shalimar, Florida	
GP	Garcia, Luis F	Post Office Box 792, Crossett 71635	364-4181
FP	Gresham, Edward A	310 North Alabama, Crossett 71635	364-9111
GP	Hicks, Charles E.	Post Office Box 232, Hamburg 71646	835-8271
GP	Rankin, J D.	Post Office Box 232, Hamburg 71646	853-8271
FP	Ripley, C. E.	317 North Alabama, Crossett 71635	364-5113
GP	Salb, R. L.	113 Pine, Crossett 71635	364-2138
FP	Thompson, Barry V.	310 North Alabama, Crossett 71635	364-5746
FP	Toon, D. L.	315 North Alabama, Crossett 71635	364-8062
		BAXTER COUNTY	
OBG	Baker, Robert L.	#10 Medical Plaza, Mountain Home 72653	425-2552
GP	Beard, Arthur L.	126 West Sixth, Mountain Home 72653	425-3131
PS	Beckman, James S., Jr.	Post Office Box 276, Mountain Home 72653	425-5232
EM	Brian, Francis M., Jr	Baxter General Hospital, Mountain Home 72653	425-3141
GP	Burnett, Richard L.	Post Office Box 301, Mountain Home 72653	425-3030
IM	Cheney, Maxwell G.	Post Office Box 725, Mountain Home 72653	425-3125
NEP	Chock, Daniel P.	Post Office Box 786, Mountain Home 72653	425-5535
PD	Chock, Helga E.	Post Office Box 786, Mountain Home 72653	425-5535
AN	Clarke, James S	449 West North, Mountain Home 72653	425-9484
R	DeLany, Clarence L.	Post Office Box 939, Salem 72576	895-3124
PTH	Douglas, Donald S.	#14 Medical Plaza, Mountain Home 72653	425-8411
FP	Dunbar, James C.	Post Office Box 410, Mountain Home 72653	425-2020
PTH	Dykstra, Peter C.	Route 6, Box 372, Mountain Home 72653 (Res.)	492-6529
R	Fontenot, Edwin, Jr.	Bull Shoals Hospital, Bull Shoals 72619	445-4292
GS	Ford, William H.	Post Office Box 433, Mountain Home 72653	425-9120
GP	Gotaas, Bernice E.	Post Office Box 44, Bull Shoals 72619	445-4755
GP	Guenthner, John F.	126 West Sixth, Mountain Home 72653	425-3131
D	Hardin, Philip R	Post Office Box 142, Mountain Home 72653	425-9737
GS	Hawkins, Michael L.	#3 Medical Plaza, Mountain Home 72653	425-6988
GP	Kelley, Lawrence A	Post Office Box 299, Bull Shoals 72619	445-4292
FP	Kerr, Robert L	Post Office Box 706, Mountain Home 72653	425-6971
OPH	Massey, J. Y.	Post Office Box H, Mountain Home 72653	425-6026
OPH	McGaughey, Allen S	Post Office Box H, Mountain Home 72653	425-6026
PTH	Peterson, Hubert C.	14 Medical Plaza, Mountain Home 72653	425-8411
R	Roberts, David H.	7th and Shiras, Mountain Home 72653	425-6322
OPH	Sneed, John W	Post Office Box H, Mountain Home 72653	425-6026
GS	Stahl, Ray E., Jr.	Post Office Box 433, Mountain Home 72653	425-9120
ORS	Sward, David T.	19 Medical Plaza, Mountain Home 72653	425-9293
R	Tullis, Joe M	Post Office Box 889, Mountain Home 72653	425-9242
P	White, John V	Post Office Box 487, Mountain Home 72653	425-6901
FP	Wilbur, Paul F	Post Office Box 706, Mountain Home 72653	425-6971
FP	Wilson, Jack C.	Post Office Box 725, Mountain Home 72653	425-3125
R	Wilson, M. Carolyn	920 South Baker, Mountain Home 72653	425-2398
		BENTON COUNTY	
OBG	Addington, Alfred R.	1116 Poplar Place, Rogers 72756	636-0300
PD	Allen, L. Barry	1114 Poplar Place, Rogers 72756	636-9234
FP	Arkins, James H	Post Office Box 669, Bentonville 72712	273-9056
P	Ball, Eugene H	1406 West Walnut, Rogers 72756	636-8307
GP	Baltes, Bernard J.	Post Office Box 369, Gravette 72736	787-5221
GS	Bledsoe, James H	#6 Halsted Circle, Rogers 72756	636-5411
OPH	Boozman, Fay W., III	Post Office Box 1353, Rogers 72756	636-7506
D	Carter, Vernon H.	1301 West Persimmon, Rogers 72756	636-0599
FP	Clower, John D.	Post Office Box 737, Rogers 72756	636-2711
FP	Cohagan, Donald L.	408 Northwest "I", Bentonville 72712	273-5543
RD	Compton, Neil E.	Post Office Box 209, Bentonville 72712 (Res)	273-5123
GS	Costaldi, Mario E.	#6 Halsted Circle, Rogers 72756	636-5411
P	Dean, Lee A	Route 4, Box 154, Rogers 72756 (Res.)	636-3694
PTH	Denman, David A.	Rogers Memorial Hospital, Rogers 72756	636-0200
IM	Donnell, Robert W.	Post Office Box 737, Rogers 72756	636-2711
OBG	Elkins, James P.	1116 Poplar Place, Rogers 72756	636-0300
GP	Floyd, Louis C.	Route 8, Box 100, Bentonville 72712	855-3711
FP	Garrett, David C.	Post Office Box 737, Rogers 72756	636-2711
GP	Garrett, John L.	Post Office Box 369, Gravette 72736	787-5221
GP	Hall, Billy V.	Post Office Box 369, Gravette 72736	787-5221
PD	Harmon, Harry M.	1114 Poplar Place, Rogers 72756	636-9234
ORS	Henderson, O. L.	101 North 37th, Rogers 72756	636-9607
FP	Hitt, Jerry L.	Post Office Box 737, Rogers 72756	636-2711
OPH	Hof, C William	Post Office Box 1353, Rogers 72756	636-7506
FP	Holder, Robert E.	Post Office Box 669, Bentonville 72712	273-9056
AN	Horner, Glennon A	Post Office Box 1599, Rogers 72756	636-3840
FP	Howard, W H., Jr.	Post Office Box 739, Bentonville 72712	273-5551
FP	Hull, Robert R	Post Office Box 737, Rogers 72756	636-2711
FP	Huskins, John A.	Post Office Box 737, Rogers 72756	636-2711
RD	Jennings, W. E.	817 Summit Drive, Rogers 72756 (Res.)	636-3122
ORS	Kendrick, Carl M.	101 North 37th, Rogers 72756	636-9607
R	Knapp, James R	Rogers Memorial Hospital, Rogers 72756	636-0200, Ext. 764
PD	Knight, Richard R	1114 Poplar Place, Rogers 72756	636-9234
IM	Miles, R. W.	Post Office Box 1000, Rogers 72756	636-6551
FP	Mullins, Neil D.	Post Office Box 296, Bentonville 72712	273-9400
GP	McCollum, Edward N.	Post Office Box 127, Decatur 72722	752-3233
GE	McKnight, William D.	Post Office Box 1567, Rogers 72756	636-3627

Type of Practice	Member's Name	Address	Telephone Number
FP	Neaville, Gary A	Post Office Box 737, Rogers 72756	636-2711
ONC	Panettiere, Frank J.	#6 Halsted Circle, Rogers 72756	636-5411
GS	Pearson, Richard N	#6 Halsted Circle, Rogers 72756	636-5411
RD	Pickens, James L	2212 West Walnut, Rogers 72756 (Res)	636-2862
R	Platt, Michael R.	Post Office Box 86, Gravette 72736	787-5425
OTO	Reese, Michael C.	1110 West Elm, Rogers 72756	636-0110
RD	Robbins, Robert H.	122 See Street, Rogers 72756 (Res.)	925-1506
FP	Rollow, John A	408 Northwest "I", Bentonville 72712	273-2497
IM	Rolniak, Wallace A	Post Office Box 1000, Rogers 72756	636-6551
GP	Ronald, Douglas C.	Route 8, Box 100, Bentonville 72712	855-3711
FP	Steadman, Hunter M., Jr.	Post Office Box 669, Bentonville 72712	273-9056
FP	Stone, W Tex	1219 West Walnut, Rogers 72756	636-6881
R	Swaim, Terry J.	12th and Walnut, Rogers 72756	636-0200, Ext. 764
IM	Swindell, William G	Post Office Box 1000, Rogers 72756	636-6551
U	Turley, Jan T	1227 West Walnut, Rogers 72756	636-9669
IM	Waldon, G. Bruce	Post Office Box 1000, Rogers 72756	636-6551
GP	Warren, Grier D	Post Office Box 737, Rogers 72756	636-2711
FP	Weaver, Donald D.	Post Office Box 296, Bentonville 72712	273-9400
GP	Webb, William F.	Post Office Box 368, Decatur 72722	752-3233
IM	Wright, Larry D.	Post Office Box 1000, Rogers 72756	636-6551

BOONE COUNTY

GS	Bell, Thomas E.	Post Office Box 1116, Harrison 72601	741-6418
R	Bennett, Joe D.	Post Office Box 969, Harrison 72601	741-9667
P	Butts, Donald R.	Post Office Box 1214, Harrison 72601	741-3915
OTO	Chambers, Carlton L., III	Bower at Pine, Harrison 72601	741-7684
PD	Chambers, Sue R.	Bower at Pine, Harrison 72601	741-7684
FP	Daniel, Charles D.	Post Office Box E, Marshall 72650	448-3327
U	Ferguson, Noel F.	707 North Vine, Harrison 72601	741-9481
FP	Fowler, Ross	217 West Stephenson Avenue, Harrison 72601	741-8651
IM	Garland, William J., Jr.	Post Office Box 1077, Harrison 72601	741-3459
GS	Gladden, Jean C.	Post Office Box 1118, Harrison 72601	741-8275
GS	Hoberock, Thomas R.	Post Office Box 1116, Harrison 72601	741-7411
TS	Hudson, William A	Hudsonakers, Jasper 72641 (Res)	446-2948
RD	Jackson, Ulys	424 South Willow, Harrison 72601 (Res.)	743-1134
GP	Kirby, Henry V.	825 North Spring, Harrison 72601	741-5022
IM	Klepper, Charles R.	Post Office Box 814, Harrison 72601	741-3592
FP	Langston, Robert H.	520 North Spring, Harrison 72601	741-8286
OPH	Laule, Alice R.	715 West Sherman, Harrison 72601	741-1910
ORS	Ledbetter, Charles A.	224 West Erie, Harrison 72601	741-8289
OBG	Mahoney, Paul L., Jr.	Post Office Box 1241, Harrison 72601	741-7334
FP	Maris, Mahlon O	Post Office Box 1597, Harrison 72601	741-8247
FP	McCoy, Orville B.	Post Office Box 578, Harrison 72601	741-3592
FP	Reese, Ronald R.	Post Office Box 458, Harrison 72601	741-2299
R	Robinson, G. Allen	Post Office Box 728, Harrison 72601	741-2763
R	Rozeboom, Victor A.	Post Office Box 1134, Harrison 72601	741-1166
GP	Scroggins, Sam J.	825 North Spring, Harrison 72601	741-6373
OBG	Simpson, Thomas J.	702 North Spring, Harrison 72601	741-2441
CD	Smith, H. Van	Post Office Box 1077, Harrison 72601	741-3459
ORS	Vowell, Don R	224 West Erie, Harrison 72601	741-8289
FP	Wallace, Oliver	Post Office Drawer AA, Green Forest 72638	438-5218
GS	Williams, Rhys A.	Post Office Box 1118, Harrison 72601	741-8275
FP	Wilson, Joe B.	520 North Spring, Harrison 72601	741-8286

BRADLEY COUNTY

GP	Chambers, F. D.	219 East Central, Warren 71671	226-5873
RD	Crow, Merl T., Jr.	504 Hankins, Warren 71671 (Res.)	226-3326
FP	Marsh, James W.	302 North Main, Warren 71671	226-2112
FP	Pennington, Kerry F.	205 East Church, Warren 71671	226-5811
FP	Whaley, William C., Jr.	205 East Church, Warren 71671	226-5811
FP	Wynne, George F	113 West Cypress, Warren 71671	226-2844

CHICOT COUNTY

GP	Burge, John H.	Lake Village Clinic, Lake Village 71653	265-5343
GS	Burge, John P.	Lake Village Clinic, Lake Village 71653	265-5343
GP	Russell, John R.	Lake Village Clinic, Lake Village 71653	265-5343
IM	Sinlar, P	2420 North Highway 65, Eudora 71640	355-4496
GP	Smith, Major E.	Post Office Box 310, Dermott 71638	538-5717
GP	Talbot, Allen G	Post Office Box 788, Lake Village 71653	265-5343
FP	Tan, Chu Iy	604 South Pecan, Dermott 71638	538-3234
GP	Thomas, H. W	Post Office Box 250, Dermott 71638	538-5255
GP	Tvedten, Tom	Lake Village Clinic, Lake Village 71653	265-5343
GP	Vichugsananon, Niponth	Post Office Box 385, Lake Village 71653	265-5374
GP	Weaver, William J	Post Office Box O, Eudora 71640	355-4376
GP	Wilson, Thomas C.	Post Office Box J, Dermott 71638	538-5253

CLARK COUNTY

RD	Anderson, P R	Post Office Box 758, Arkadelphia 71923 (Res)	246-4464
FP	Balay, John W.	416 Main, Arkadelphia 71923	246-2431
GP	Blackmon, James T.	1008 Pine, Arkadelphia 71923	246-6734
RD	Clark, Charles G	1108 Huddleston, Arkadelphia 71923 (Res.)	246-4493
RD	Kennedy, J W	106 Evonshire, Arkadelphia 71923 (Res.)	246-8105
FP	Luck, H D.	3004 West Pine, Arkadelphia 71923	246-2471
FP	McGrew, Gary L.	107 North 3rd, Gurdon 71743	353-2504
P	Parsons, V. Earl	117 North 11th, Arkadelphia 71923	246-8364
GP	Peeples, George R.	305 East Main, Gurdon 71743	353-4422
GP	Ritter, N R	3004 West Pine, Arkadelphia 71923	246-2471
FP	Russell, James D.	3004 West Pine, Arkadelphia 71923	246-2471
GP	Scarborough, John W	204 East Walnut, Gurdon 71743	353-4486
RD	Toombs, Vernon L.	101 Charlotte, Gurdon 71743 (Res.)	353-2935

CLEBURNE COUNTY

GP	Ashabranner, Wesley J.	401 West Searcy, Heber Springs 72543	362-2414
OPH	Baldridge, Max	Post Office Box 431, Heber Springs 72543	362-3479
RD	Barnett, James C.	1828 West Front, Heber Springs 72543 (Res.)	362-2786
GP	Barnett, Michael E.	4th and Spring Streets, Heber Springs 72543	362-3143
OPH	Beasley, Harold	Post Office Box 272, Heber Springs 72543	362-3479
GP	Blackburn, Steve	421 South 7th, Heber Springs 72543	362-8203
FP	Eans, Thomas L.	1709 West Main, Heber Springs 72543	362-8256
FP	Hinkle, R. A.	Post Office Box 128, Quitman 72131	589-2600
GP	Poff, Joseph H.	Post Office Box 1111, Heber Springs 72543	362-2414
FP	Poff, Nathan L.	Post Office Box 1111, Heber Springs 72543	362-2414
R	Scruggs, Joe B.	Cleburne County Hospital, Heber Springs 72543	362-3121
IM	Sharp, Jack V.	Post Office Box 70, Heber Springs 72543	362-3316

Type of Practice	Member's Name	Address	Telephone Number
		COLUMBIA COUNTY	
FP	Alexander, John E.	707 North Washington, Magnolia 71753	234-2288
PD	Baldwin, Ronald L.	1411 North Jackson, Magnolia 71753	234-7912
FP	Farmer, John M.	104 East Columbia, Magnolia 71753	234-2230
FP	Griffin, Rodney L.	123 North Jackson, Magnolia 71753	234-3040
R	Hunter, Robert W., Jr.	Magnolia Hospital, Magnolia 71753	235-3243
FP	Kelley, Charles W.	1327 North Washington, Magnolia 71753	234-5544
GS	McMahen, H. Scott	Post Office Box 647, Magnolia 71753	234-3340
FP	Pullig, Thomas A.	805 North Jackson, Magnolia 71753	234-8570
FP	Roberts, Franklin D.	110 West North, Magnolia 71753	234-8430
GP	Ruff, John L.	104 Hospital Road, Magnolia 71753	234-2144
GP	Rushton, Joe F.	219 North Washington, Magnolia 71753	234-1168
GP	Strange, Vance M.	Post Office Box 67, Stamps 71860	533-2438
GYN	Talley, H. Aubry	804 North Jackson, Magnolia 71753	234-8232
FP	Walker, Jack T.	123 North Jackson, Magnolia 71753	234-3040
FP	Weber, Charles H.	110 West North, Magnolia 71753	234-4411
		CONWAY COUNTY	
GP	Bishop, Robert G.	Post Office Box 256, Morrilton 72110	354-3861
GP	Hickey, Thomas H.	Post Office Box 214, Morrilton 72110	354-4623
GP	Hyatt, Benjamin C.	Post Office Box 265, Perryville 72126	889-5141
FP	Lipsmeyer, Keith M.	Post Office Box 677, Morrilton 72110	354-2456
GP	Owens, Gastor B.	Route 3, Box 2, Morrilton 72110	354-4505
PTH	Rozzell, Allen R.	601 South Moose, Morrilton 72110	354-1225
FP	Wells, Charles F.	601 South Moose, Morrilton 72110	354-2123
		CRAIGHEAD-POINSETT COUNTY	
D	Alston, Herman D.	816 Cobb Street, Jonesboro 72401	932-4570
R	Aston, J. Ken	3024 Stadium Road, Jonesboro 72401	972-0045
IM	Baldridge, John A.	505 East Matthews, Jonesboro 72401	932-1198
GYN	Basinger, James W.	Post Office Box 3075, Jonesboro 72401	972-5555
OBG	Berry, Donald M.	Post Office Box 1478, Jonesboro 72401	935-3990
OBG	Blair, Richard A.	Post Office Box 1478, Jonesboro 72401	935-3990
FP	Blanchard, Steven M.	410 East Jackson, Jonesboro 72401	933-0445
P	Blaylock, Jerry D.	901 South Church, Jonesboro 72401	935-0360
R	Bodeker, Larry J.	Post Office Box 1030, Jonesboro 72401	932-0639
U	Bogaev, Leonard R.	812 Cobb, Jonesboro 72401	932-2926
R	Buckner, John H.	823 Union, Jonesboro 72401	932-7458
IM	Burns, Richard G., Sr.	505 East Matthews, Jonesboro 72401	932-1198
IM	Clopton, Owen H.	505 East Matthews, Jonesboro 72401	932-1198
HEM	Cohen, Robert S.	Post Office Box 865, Jonesboro 72401	932-7379
FP	Crawley, Michael E.	3100 Apache Drive, Jonesboro 72401	972-1720
ORS	Dickson, Glenn E.	505 East Matthews, Jonesboro 72401	932-1820
GS	Drake, James E.	416 East Matthews, Jonesboro 72401	972-1960
OTO	Eddington, William R.	505 East Matthews, Jonesboro 72401	935-8132
GS	Faris, John C.	907 Union, Jonesboro 72401	935-8470
FP	Forestiere, A. J.	Post Office Box 106, Harrisburg 72432	578-5443
R	Garner, William L.	Post Office Box 1030, Jonesboro 72401	932-0639
OPH	George, F. Joseph	1916 East Matthews, Jonesboro 72401	932-0485
FP	Golden, Stephen C.	410 East Jackson, Jonesboro 72401	933-0445
OTO	Gossett, Clarence E.	505 East Matthews, Jonesboro 72401	935-8132
R	Green, W. Robert	Post Office Box 1030, Jonesboro 72401	932-7458
IM	Guinn, Donald R.	505 East Matthews, Jonesboro 72401	932-1198
P	Guthrie, Alastair N.	2701 South Caraway Road, Jonesboro 72401	932-0692
IM	Hall, Ray H.	311 East Matthews, Jonesboro 72401	935-4150
RD	Harper, Thomas P.	108 Reeves, Monette 72447 (Res.)	486-5771
GE	Hightower, Michael D.	311 East Matthews, Jonesboro 72401	935-4150
GP	Hogue, Ernest L.	920 Union, Jonesboro 72401	932-3022
	James, Frank M.	Fort Supply, Oklahoma	
AN	Johnson, Larry H.	806 South Church, Jonesboro 72401	932-4211
PD	Johnson, Roehl W.	505 East Matthews, Jonesboro 72401	935-6012
	Jones, R. J.	Pease AFB, New Hampshire	
GE	Jordan, Harry J.	311 East Matthews, Jonesboro 72401	935-9277
GS	Keisker, H. W.	505 East Matthews, Jonesboro 72401	932-4581
PD	Kemp, Charles E.	505 East Matthews, Jonesboro 72401	935-6012
PTH	Kroe, Donald J.	411 East Matthews, Jonesboro 72401	932-7430
U	Lassonde, Robert G.	3100 Apache Drive, Jonesboro 72401	932-8674
FP	Lawrence, Robert O.	417 East Matthews, Jonesboro 72401	972-0550
GP	Ledbetter, Joseph W.	804 South Church, Jonesboro 72401	935-5454
OBG	Lunde, Stephen P.	Post Office Box 1478, Jonesboro 72401	935-3990
NEP	Mackey, Michael	311 East Matthews, Jonesboro 72401	935-4150
ORS	Mahon, Larry E.	910 South Main, Jonesboro 72401	935-9123
AN	Mitchell, George E.	806 South Church, Jonesboro 72401	932-4211
FP	Modelevsky, Aaron C.	Post Office Box 1427, Jonesboro 72401	932-0980
OPH	McKee, Bobby E.	505 East Matthews, Jonesboro 72401	935-6396
PTH	McLendon, Richard E.	411 East Matthews, Jonesboro 72401	932-7430
EM	Neff, Michael D.	224 East Matthews, Jonesboro 72401	972-4288
EM	Peeler, Malcolm O.	224 East Matthews, Jonesboro 72401	972-4288
GS	Piat, Robert D.	3100 Apache Drive, Jonesboro 72401	972-8470
FP	Plunk, Hermie G.	5005 East Nettleton, Jonesboro 72401	932-1181
GP	Poole, Grover D.	Post Office Box 10, Jonesboro 72401	932-2634
P	Price, Edwin F.	Post Office Box 5033, Jonesboro 72401	972-0290
	Pustrom, Einar	Gastonia, North Carolina	
PD	Rainwater, W. T.	505 East Matthews, Jonesboro 72401	935-6012
GP	Raney, Bascom P.	403 East Matthews, Jonesboro 72401	935-5529
OBG	Reid, E. Paul	3100 Apache Drive, Jonesboro 72401	972-6740
FP	Robbins, Robert A.	Post Office Box 8, Lake City 72437	237-4396
FP	Robinette, J. M.	801 Osler Drive, Jonesboro 72401	932-2423
D	Rogers, James F.	406 East Washington, Jonesboro 72401	935-4755
GS	Rusher, Albert H.	416 East Washington, Jonesboro 72401	972-1960
GS	Sanders, James W.	826 South Main, Jonesboro 72401	932-4875
NS	Sapiro, Gary S.	223 East Jackson, Jonesboro 72401	972-8032
ORS	Schrantz, James L.	830 Cobb, Jonesboro 72401	972-8040
U	Scriber, Ladd J.	812 Cobb, Jonesboro 72401	932-2926
FP	Sears, Larry C.	924 South Main, Jonesboro 72401	972-8181
FP	Sears, V. Glenn	924 South Main, Jonesboro 72401	972-8181
RD	Shanlever, Rufus C.	1103 Wilkins, Jonesboro 72401 (Res.)	932-2450
ORS	Shanlever, William T.	906 South Main, Jonesboro 72401	972-1640
EM	Shepherd, W. F.	224 East Matthews, Jonesboro 72401	972-4288
PD	Skaug, Warren A.	505 East Matthews, Jonesboro 72401	935-6012
GS	Smith, B. Michael	826 South Main, Jonesboro 72401	932-4875
GP	Smith, Floyd A., Jr.	415 West Main, Trumann 72472	483-6411
GP	Smith, Vestal B.	Post Office Box 614, Marked Tree 72365	358-2811
AN	Sparks, E. Barrett	806 South Church, Jonesboro 72401	932-4211
OBG	St. Clair, John T., Jr.	Post Office Box 1478, Jonesboro 72401	935-3990

Type of Practice	Member's Name	Address	Telephone Number
OPH	Stainton, Joseph C	1916 East Matthews Jonesboro 72401	932-0485
PTH	Stainton, Robert M., Jr	411 East Matthews, Jonesboro 72401	932-7430
FP	Stallings, Joe H	417 East Matthews, Jonesboro 72401	972-0550
FP	Swingle, Charles G	Post Office Box 267, Marked Tree 72365	358-2036
FP	Taylor, G Wayne	211 East Matthews, Jonesboro 72401	972-1570
IM	Taylor, Robert D	311 East Matthews, Jonesboro 72401	935-4150
FP	Tedder, Michael E	3100 Apache Drive, Jonesboro 72401	972-1810
FP	Thomas, J. Fred	Southgate Plaza, Jonesboro 72401	935-8510
OPH	Utley, Phillip M	920 South Main, Jonesboro 72401	932-8221
GP	Verser, Joe	Post Office Box 106, Harrisburg 72432	578-5443
PTH	Vollman, Don B., Jr	411 East Matthews, Jonesboro 72401	932-7430
OPH	Webb, James W	920 South Main, Jonesboro 72401	932-8221
U	Williams, E. Walden	812 Cobb, Jonesboro 72401	932-2926
GP	Wilson, Francis M	Post Office Box 4098, Jonesboro 72401	932-8121
PTH	Wilson, Joe T., Jr	411 East Matthews, Jonesboro 72401	932-7430
RD	Winters, W Lee	2113 Indian Trails, Jonesboro 72401 (Res.)	935-4824
GP	Wisdom, G Durwood	Post Office Box 4098, Jonesboro 72401	932-8121
IM	Woodruff, Stephen O	311 East Matthews, Jonesboro 72401	935-4150
OTO	Young, William C., Jr	311 East Matthews, Jonesboro 72401	932-6799

CRAWFORD COUNTY

FP	Darden, Lester R	Post Office Box 1327, Van Buren 72956	474-2336
GP	Edds, Millard C	1103 Chestnut, Van Buren 72956	474-2361
IM	Edwards, Henry N	Post Office Box 608, Van Buren 72956	474-5061
#	Hopkins, Ed G	Van Buren	
OBG	McHattie, Tom J	Chestnut and 20th, Van Buren 72956	474-3424
GP	Sasser, L Gordon, III	Post Office Box 438, Alma 72921	632-3855
GP	Shearer, F E	Post Office Box 458, Alma 72921	632-3555
FP	Sills, David B	Post Office Box 16, Mountainburg 72946	369-2091
GP	Travis, A Lawrence	Post Office Box 1327, Van Buren 72956	474-2336
PD	Yeager, Thomas D	1103 Chestnut, Van Buren 72956	474-2361

CRITTENDEN COUNTY

GYN	Arnold, Sidney W	228 Tyler, West Memphis 72301	735-0836
IM	Datzman, Marylin A	228 Tyler, West Memphis 72301	735-0833
FP	Deneke, Milton D	Post Office Box 687, West Memphis 72301	735-1170
OBG	Ferguson, T M	200 South Rhodes, West Memphis 72301	735-2150
OBG	Ford, Robert C., Jr	200 South Rhodes, West Memphis 72301	735-2150
FP	Hamilton, Ralph B	300 South Rhodes, West Memphis 72301	735-1170
IM	Hernandez, Jacinto	228 Tyler, West Memphis 72301	735-2069
IM	Herring, William T	228 Tyler, West Memphis 72301	735-6803
OTO	Hodges, John M	300 Tyler, West Memphis 72301	735-7603
GS	Huffstutter, P J	308 South Rhodes, West Memphis 72301	735-3664
GS	Jay, Gilbert D., III	200 South Rhodes, West Memphis 72301	735-4612
AN	Kendrick, W R	200 Tyler, West Memphis 72301	735-1500
OPH	Kennedy, Keith B	316 Tyler, West Memphis 72301	735-7680
FP	Klutz, Joseph P	228 Tyler, West Memphis 72301	735-0833
GS	Lanford, H G	308 South Rhodes, West Memphis 72301	735-3664
ORS	L'Heureux, Guy J	228 Tyler, West Memphis 72301	732-3836
FP	Lubin, Milton	200 South Rhodes, West Memphis 72301	735-3919
ORS	Meredith, Samuel G	228 Tyler, West Memphis 72301	732-3836
IM	Nadeau, Kenneth R	228 Tyler, West Memphis 72301	735-0833
IM	Peeples, Chester W., Jr	228 Tyler, West Memphis 72301	735-1973
OTO	Pettit, Paul N	300 Tyler, West Memphis 72301	735-7603
GS	Schoettle, G. P	308 South Rhodes, West Memphis 72301	735-3664
FP	Shrader, Floyd R	228 Tyler, West Memphis 72301	732-1891
GP	Smith, Bedford W	300 South Rhodes, West Memphis 72301	735-1170
IM	Taylor, C Herbert, Jr	228 Tyler, West Memphis 72301	735-2069
R	Utley, L. Thomas	200 Tyler, West Memphis 72301	735-1500
IM	Webb, Dan W	228 Tyler, West Memphis 72301	735-1973
OBG	Westbrook, H. Wade	228 Tyler, West Memphis 72301	732-2531
FP	Wright, William J	210 Shoppingway, West Memphis 72301	735-8751
OBG	Zschappel, Robert H	200 South Rhodes, West Memphis 72301	735-2150

CROSS COUNTY

GP	Beaton, K E	Post Office Box 158, Wynne 72396	238-2321
FP	Bethell, Robert D	Post Office Box 158, Wynne 72396	238-2321
FP	Bui, Doan V	Post Office Box 725, Parkin 72373	755-5442
FP	Burks, Willard G	Post Office Box 158, Wynne 72396	238-2321
GP	Crain, Vance J	Post Office Box 158, Wynne 72396	238-2321
FP	Jacobs, James R	411 South Falls, Wynne 72396	238-3261
FP	Young, John H	411 South Falls, Wynne 72396	238-3261

DALLAS COUNTY

FP	Delamore, John H	Post Office Box 351, Fordyce 71742	352-7117
FP	Howard, Don G	110 North Clifton, Fordyce 71742	352-3151
FP	Nutt, Hugh A	110 North Clifton, Fordyce 71742	352-5144
GP	Taylor, George D	Post Office Box 36, Sparkman 71763	678-2406

DESHA COUNTY

GS	Go, Kong Hua L	Post Office Box 97, Dumas 71639	382-5252
GP	Harris, Howard R	207 South Elm, Dumas 71639	382-4425
FP	Hoagland, Robert A	145 West Waterman, Dumas 71639	382-4878
FP	Money, William L., Jr	207 South Elm, Dumas 71639	382-4425
GP	Moss, Swan B	Post Office Box 652, McGehee 71654	222-3141
FP	Prosser, Robert L., III	Post Office Box 707, McGehee 71654	222-6131
FP	Robinson, Guy U	207 South Elm, Dumas 71639	382-4425
GP	Turney, Lonnie R	101 South Third, McGehee 71654	222-4044
FP	Young, James E	Post Office Box 707, McGehee 71654	222-6131

DREW COUNTY

PD	Austin, L. K., Jr	711 H L. Ross Drive, Monticello 71655	367-6832
GP	Binns, Van C	203 East Trotter, Monticello 71655	367-3531
FP	Burns, Robert E	906 Roberts Drive, Monticello 71655	367-6867
FP	Busby, A K	733 Roberts Drive, Monticello 71655	367-3246
FP	David, Andrew E	750 H L. Ross Drive, Monticello 71655	367-6231
GP	Llana, Angelo T	232 South Main, Monticello 71655	367-5955
GP	Price, Johnnie P	232 South Main, Monticello 71655	367-2473
FP	Wallick, Paul A	906 Roberts Drive, Monticello 71655	367-6867
FP	Wilson, Harold F	906 Roberts Drive, Monticello 71655	367-6867

Type of Practice	Member's Name	Address	Telephone Number
		FAULKNER COUNTY	
RD	Archer, Charles A., Jr	411 Western, Conway 72032 (Res.)	329-3412
FP	Banister, Bob G.	923 Parkway, Conway 72032	329-3824
AN	Beasley, Margaret D.	Post Office Box 404, Conway 72032	329-3831
FP	Beasley, T. O.	Post Office Box 1386, Conway 72032	329-2946
ADM	Benafield, Robert B.	Post Office Box 2181, Little Rock 72203	378-2356
GP	Daniel, Sam V.	574 Locust, Conway 72032	329-6111
FP	Dobbs, John C.	Post Office Box 1327, Conway 72032	329-2948
FP	Doss, John R.	College and Dennison, Conway 72032	329-2946
IM	Furlow, William C.	Post Office Box 1367, Conway 72032	327-1325
R	Garrison, James S.	Conway Memorial Hospital, Conway 72032	329-3831
FP	Gordy, L. Fred, Jr.	552 Locust, Conway 72032	329-6881
OPH	Hendrickson, Richard	1504 Caldwell, Conway 72032	327-4444
OPH	Magie, J. J.	1504 Caldwell, Conway 72032	327-4444
OBG	McChristian, Paul L.	2519 College Avenue, Conway 72032	327-6547
FP	Ross, Rex W.	Post Office Box 1327, Conway 72032	329-2948
FP	Smith, John D.	923 Parkway, Conway 72032	329-3824
FP	Smith, Lander A.	923 Parkway, Conway 72032	329-3824
FP	White, Tommie G.	Post Office Box 1386, Conway 72032	329-2946
		FRANKLIN COUNTY	
GP	Calaway, Robert L.	Post Office Box C, Mulberry 72947	997-1484
FP	Gibbons, David L.	Post Office Box 136, Ozark 72949	667-4165
	Jeffers, Robert G.	Raleigh, North Carolina	
IM	Jefferson, Christina M.	Post Office Box 1057, Ozark 72949	667-4021
PD	Jefferson, Thomas C.	Post Office Box 1057, Ozark 72949	667-4021
ADM	Long, C. C.	Post Office Box 1208, Fort Smith 72902	782-8218
GS	Smith, John C.	Post Office Box 1057, Ozark 72949	667-4021
		GARLAND COUNTY	
IM	Adams, Frank M.	236 Central, Hot Springs 71901	623-8751
U	Aspell, Robert W.	304 St. Louis, Hot Springs 71901	321-9013
OTO	Atkinson, Robert H.	303 Medical Arts Building, Hot Springs 71901	623-6101
IM	Bodemann, Michael C.	615 West Grand, Hot Springs 71901	623-2781
IM	Bodemann, Stephen L.	615 West Grand, Hot Springs 71901	623-2781
R	Bohnen, Loren O.	911 West Grand, Hot Springs 71913	623-6693
IM	Bond, John B., Jr.	505 West Grand, Hot Springs 71901	624-5697
OTO	Borg, Robert V.	100 Ridgeway Place, Hot Springs 71901	624-5422
OPH	Bracken, Ronald J.	505 West Grand, Hot Springs 71901	624-4478
OPH	Braley, Richard E.	312 St. Louis Street, Hot Springs 71901	624-1196
GS	Brunner, John H.	101 Whittington, Hot Springs 71901	321-2229
U	Burrow, Thomas E.	903 West Grand, Hot Springs 71913	623-8110
RD	Burton, Frank M.	106 Trivista Right, Hot Springs 71901 (Res.)	623-8323
U	Burton, James F.	101 Whittington, Hot Springs 71901	321-2229
GS	Campbell, James W.	236 Central, Hot Springs 71901	624-5700
D	Cates, Jack A.	100 Ridgeway Place, Hot Springs 71901	624-3376
GS	Chamberlain, Joe W.	330 Sixth, Hot Springs 71913	623-4477
GS	Chamberlain, Warren W.	330 Sixth, Hot Springs 71913	623-4477
RHU	Clardy, E. K.	604 Central Tower, Hot Springs 71901	623-9684
GP	Clark, Robert B.	211 Hobson, Hot Springs 71913	623-8341
GPM	Connelly, J. H.	Route 5, Box 416, Hot Springs 71913 (Res.)	525-1576
RD	Daniel, Richard L.	125 Carl Drive, #58, Hot Springs 71913 (Res.)	623-9753
D	Dean, Arthur J., Jr.	99 Little Pine, Hot Springs 71901	624-0673
IM	Dembinski, T. Henry	804½ Central, Hot Springs 71901	623-9781
RD	Dodson, John W.	37 Circle Drive, Hot Springs 71901 (Res.)	623-1025
GE	Dunn, Richard W.	133 Arbor, Hot Springs 71901	623-4898
ORS	Durham, Thomas M.	505 West Grand, Hot Springs 71901	623-7717
RD	Edwards, Gwilym A.	1 Magda Lane, Hot Springs Village 71909 (Res.)	922-0552
GS	Eisele, W. Martin	101 Whittington, Hot Springs 71901	321-2229
OBG	Finan, E. Michael	225 Linden, Hot Springs 71901	623-6455
R	Fore, Robert W.	911 West Grand, Hot Springs 71913	623-6693
GP	Fotioo, George J.	505 Central Towers Building, Hot Springs 71901	623-5121
GS	French, James H.	101 Whittington, Hot Springs 71901	321-2229
FP	Gardial, J. Richard	125 Greenwood, Hot Springs 71901	623-3373
FP	Gardner, James L.	125 Greenwood, Hot Springs 71901	623-0904
RD	Garner, Onyx P.	Post Office Box 428, Lake Hamilton 71951 (Res.)	525-8752
FP	Graham, Richard F.	505 West Grand, Hot Springs 71901	623-4391
OTO	Griffin, James E.	100 Ridgeway, Hot Springs 71901	624-5422
OBG	Haggard, John L.	101 Whittington, Hot Springs 71901	321-2229
OTO	Harper, Edwin L.	100 Ridgeway, Hot Springs 71901	624-5422
CD	Heinemann, Fred M.	110 Hawthorne, Hot Springs 71901	623-5581
GS	Hill, Robert L.	905 West Grand, Hot Springs 71913	623-9581
FP	Hollis, Thomas H.	125 Greenwood, Hot Springs 71901	623-3373
GS	Howe, H. Joe	101 Whittington, Hot Springs 71901	321-2229
D	Irwin, William G.	Post Office Box 2588, Hot Springs 71901	246-2431
P	Jackson, George W.	901 West Grand, Hot Springs 71913	623-3502
GYN	Jackson, Haynes G.	Post Office Box 2067, Hot Springs 71913	623-6628
OBG	Jackson, Haynes G., Jr.	Post Office Box 2067, Hot Springs 71913	623-6628
CD	Jayaraman, K. K.	2513 Malvern, Hot Springs 71901	321-2513
PTH	Jayaraman, Vilasini D.	Post Office Box 1460, Hot Springs 71901	623-2518
OPH	Johnston, Gaither C.	99 Little Pine, Hot Springs 71901	624-7106
GP	Jumper, Mark W.	211 Hobson, Hot Springs 71913	623-8341
GS	Kaler, Ron A.	905 West Grand, Hot Springs 71913	623-9581
GP	Keadle, William R.	Post Office Box P, Glenwood 71943	356-3155
OBG	Kimberlin, G. Dan	101 Whittington, Hot Springs 71901	321-2229
ORS	Kincheloe, A. Dale	133 Arbor, Hot Springs 71901	321-2663
RD	King, Leeman H.	610 Ramble, Hot Springs 71901 (Res.)	623-8185
AN	Klugh, Walter G., Jr.	300 St. Louis Place, Hot Springs 71913	623-9216
FP	Koehn, Martin A.	328 Ouapaw, Hot Springs 71901	321-9292
IM	Lang, Patricia A.	8 Cordoba Center, Hot Springs Village 71909	624-7603
PTH	Lee, William R.	Post Office Box 1460, Hot Springs 71901	623-2518
P	Lewis, Robert L.	Post Office Box 850, Hot Springs 71901	624-2354
GP	Lovell, Clawrence R.	414 Albert Pike, Hot Springs 71913	624-1211
IM	Maruthur, Gopakumar	133 Arbor, Hot Springs 71901	623-1545
IM	Mashburn, William R.	99 Little Pine, Hot Springs 71901	623-4453
GS	Meek, Gary N.	905 West Grand, Hot Springs 71913	623-9581
R	Munos, Louis R.	911 West Grand, Hot Springs 71913	623-6693
ORS	McConkie, Stuart B.	715 West Grand, Hot Springs 71913	623-5300
GYN	McCrary, Robert F.	505 West Grand, Hot Springs 71901	321-2217
NEP	McCrary, Robert F., Jr.	236 Central, Hot Springs 71901	321-9803
PD	McFarland, Louis R.	211 Hobson, Hot Springs 71901	321-1314
GP	McMahan, James C.	306 Albert Pike, Hot Springs 71901	624-2111
PD	Newton, Doane M.	236 Woodbine, Hot Springs 71901	321-2546
CD	Pai, B. V.	2513 Malvern, Hot Springs 71901	321-2513
OBG	Pappas, Deno P.	101 Whittington, Hot Springs 71901	321-2229

Type of Practice	Member's Name	Address	Telephone Number
GP	Parkerson, Carl R.	300 Woodbine, Hot Springs 71901	624-3379
GP	Parkerson, Cecil W.	1421 Central, Hot Springs 71901	624-3341
AN	Peeples, Raymond E., Sr.	Route 19, Box 254, Hot Springs 71901 (Res.)	262-3346
PTH	Pemmaraju, Seshagirirao	Post Office Box 1460, Hot Springs 71901	623-2518
RD	Power, Allyn R.	Majestic Hotel, Hot Springs 71901 (Res.)	623-5511
OBG	Rainwater, W. S.	101 Whittington, Hot Springs 71901	321-2229
PD	Robert, Jon M.	236 Woodbine, Hot Springs 71901	321-2546
RHU	Robertson, Fred T.	Post Office Box 850, Hot Springs 71901	624-1281
PM	Rosenzweig, Joseph L.	Post Office Box 1358, Hot Springs 71901	624-4411
GP	Sanders, Hallman E.	220 Bafanridge, Hot Springs 71901 (Res.)	624-2869
GP	Seifert, Kenneth A.	8 DeSoto Center, Hot Springs Village 71909	922-0540
FP	Shriner, Walter	8 DeSoto Center, Hot Springs Village 71909	922-0540
FP	Simpson, John B.	328 Ouapaw, Hot Springs 71901	321-9292
R	Springer, M. R., Jr.	911 West Grand, Hot Springs 71913	623-6693
R	Springer, William Y.	911 West Grand, Hot Springs 71913	623-6693
FP	Stecker, Elton H.	1315 Central, Hot Springs 71901	624-5206
FP	Stecker, Rheeta M.	1315 Central, Hot Springs 71901	624-5206
D	Stough, D. B., III	99 Little Pine, Hot Springs 71901	624-0673
OPH	Thomas, Al	Post Office Drawer D, Hot Springs 71901	624-1204
OBG	Thompson, Thomas P., Jr.	101 Whittington, Hot Springs 71901	321-2229
PD	Trieschmann, John W.	Post Office Box 2458, Hot Springs 71913	321-2546
N	Tucker, R. Paul	100 Ridgeway, Hot Springs 71901	623-7762
RD	Wade, H. King, Jr.	118 Trivista Right, Hot Springs 71901 (Res.)	623-9426
OPH	Wallace, Thomas R.	505 West Grand, Hot Springs 71901	624-0609
P	Watermann, Eugene	100 Ridgeway, Hot Springs 71901	623-6179
GP	Wise, W. Paul	Post Office Box 1358, Hot Springs 71901	624-4411, Ext. 265
U	Woodward, Philip A.	903 West Grand, Hot Springs 71913	623-8110
FP	Wright, Jack	Post Office Box 1202, Hot Springs 71901	623-2163

GRANT COUNTY

GP	Irvin, Jack M.	205 West High, Sheridan 72150	942-3171
FP	Paulk, Clyde D.	Post Office Box 307, Sheridan 72150	942-5155

GREENE-CLAY COUNTY

R	Baker, A. J.	Post Office Box 339, Paragould 72450 (Res.)	236-3486
GP	Baker, Clark M.	115 West Court, Paragould 72450	236-6356
PTH	Boggs, Dwight F.	#1 Medical Drive, Paragould 72450	239-4046
FP	Bonner, J. Darrell	1015 West Kingshighway, Paragould 72450	239-4076
FP	Cagle, Roger E.	#1 Medical Drive, Paragould 72450	239-8504
GP	Collier, George H.	Post Office Box 361, Paragould 72450	236-6911
FP	Collier, Jon D.	#5 Market Place, Paragould 72450	236-6911
GP	Crow, Asa A.	#1 Medical Drive, Paragould 72450	239-8504
FP	Duckworth, H. R.	Post Office Box 352, Piggott 72454	598-2237
GP	Futrell, J. B.	414 West 2nd, Rector 72461	595-3332
OPH	Hardcastle, R. Lowell	#1 Medical Drive, Paragould 72450	236-6948
GP	Harper, Bland R.	Post Office Box C, Monette 72447	486-2131
ORS	Hazzard, Marion P.	#1 Medical Drive, Paragould 72450	236-6996
FP	Hobby, George A.	#1 Medical Drive, Paragould 72450	239-8579
U	Jones, Bryant W.	#1 Medical Drive, Paragould 72450	239-2585
GS	Lawson, J. Larry	#1 Medical Drive, Paragould 72450	239-5916
AN	Martin, Richard O.	Post Office Box 339, Paragould 72450	239-7194
FP	Mitchell, Bennie E.	901 West Kingshighway, Paragould 72450	239-8576
FP	Muse, Jerry L.	Post Office Box 352, Piggott 72454	598-2237
RD	McKelvey, Earle D.	319 Grandview, Clarksville 72830 (Res.)	754-2382
GP	Page, Billie C.	#1 Medical Drive, Paragould 72450	236-2364
EM	Price, Robert E.	Crittenden Memorial Hospital, West Memphis 72301	735-1500, Ext. 480
R	Purcell, Donald I.	Post Office Box 339, Paragould 72450	239-8431
PTH	Richmond, Jack G.	Post Office Box 339, Paragould 72450	236-7733
GS	Sellars, John R.	#1 Medical Drive, Paragould 72450	239-5926
FP	Shedd, Leonus L.	1015 West Kingshighway, Paragould 72450	239-4076
FP	Shotts, C. Mack	#1 Medical Drive, Paragould 72450	239-8505
PD	Shotts, Vern Ann	1015 West Kingshighway, Paragould 72450	239-4076
FP	Watson, Samuel D.	901 West Kingshighway, Paragould 72450	236-8591
IM	White, Robert B.	#1 Medical Drive, Paragould 72450	239-9549
FP	Williams, Jacob M.	1015 West Kingshighway, Paragould 72450	239-4076

HEMPSTEAD COUNTY

GP	Branch, James W., Sr.	420 South Main, Hope 71801	777-4636
PTH	Dodd, N. Leland	Post Office Box 1118, Hope 71801	777-9324
OBG	Garrett, George C., Jr.	405 West 16th, Hope 71801	777-6722
GP	Goins, Dale E.	Post Office Box 550, Hope 71801	777-2131
GP	Harris, Lowell O.	Post Office Box 550, Hope 71801	777-2131
FP	Holt, Forney G.	300 East 6th, Texarkana 75502	774-3211
GS	Martindale, James G.	Post Office Box 861, Hope 71801	777-3464
GP	McKenzie, Jim	Post Office Box 687, Hope 71801	777-2321
R	Stevens, David G.	Route 4, Box 329-S, Hope 71801 (Res.)	777-9777
FP	Warmack, Asa M.	Post Office Box 687, Hope 71801	777-2321
FP	Wright, George H.	405 West 16th, Hope 71801	777-6722

HOT SPRING COUNTY

GP	Brashears, Larry B.	1234 South Main, Malvern 72104	332-5245
IM	Burton, Bruce K.	1002 Schneider, Malvern 72104	337-9031
FP	Clark, Curtis B.	294 Summar, Jackson, Tennessee 38301	901-423-1935
FP	Cobb, Russell W.	1420 Potts, Malvern 72104	332-3112
#	Cole, John W.	Malvern	
AN	Ellis, C. Randolph	1004 South Main, Malvern 72104	332-6941
FP	Justus, Michael G.	214 East Highland, Malvern 72104	337-9066
GP	Kersh, N. B.	1518 McBee, Malvern 72104	337-7533
GS	Murphy, Kenneth	1002 Schneider Drive, Malvern 72104	337-4935
GP	McCray, Raymond V.	Route 1, Box 325, Malvern 72104 (Res.)	332-5783
FP	Peters, C. F.	1420 Potts, Malvern 72104	332-2521
GP	Vaughan, John A.	115 East Highland, Malvern 72104	332-2371
FP	White, Bruce A.	214 East Highland, Malvern 72104	337-9066
FP	White, Robert H.	1004 Dyer, Malvern 72104	332-3664

HOWARD-PIKE COUNTY

FP	Buckley, Douglas A.	Post Office Box 834, Nashville 71852	845-4622
GP	Chambers, W. H.	Post Office Box 1750, Nashville 71852	845-4041
GPM	Gullett, A. Dale	Post Office Box 98, Dierks 71833	286-3154
GS	Hearnsberger, John E.	Post Office Box 88, Nashville 71852	845-1761
GP	Jones, William J.	Post Office Box 49, Glenwood 71943	356-3921
FP	King, Joe D.	Post Office Box 549, Nashville 71852	845-1933

Type of Practice	Member's Name	Address	Telephone Number
FP	Peebles, Samuel W.	120 West Sypert, Nashville 71852	845-4676
GP	Turbeville, James O.	Post Office Box 434, Murfreesboro 71958	285-2182
GP	Ward, Hiram T.	Post Office Box 319, Murfreesboro 71958	285-2491
FP	White, Phillip L.	Post Office Box 538, Murfreesboro 71958	285-3118
GP	Wilmoth, Marion H.	Post Office Box 804, Nashville 71852	845-4780

INDEPENDENCE COUNTY

FP	Baker, J. R	Post Office Box 2001, Batesville 72501	793-5356
IM	Baxley, Paul J.	Post Office Box 2707, Batesville 72501	793-5221
FP	Beck, Carl T.	Post Office Drawer J, Mountain View 72560	269-3834
R	Bess, Lloyd G	1490 Byers, Batesville 72501	793-2207
FP	Bostick, Roberd M	Post Office Box 2116, Batesville 72501	793-1126
U	Day, Charles H	Post Office Box 2116, Batesville 72501	698-1808
P	Goodin, William H., Jr	407 Virginia Drive, Batesville 72501	793-4831
PTH	Hill, John M., Jr.	1710 Harrison, Batesville 72501	698-1861
OPH	Jones, Edward T.	180 North 5th, Batesville 72501	793-5257
IM	Kauffman, David	501 Virginia Drive, Batesville 72501	793-8374
GP	Ketz, Wesley J	Post Office Box 2695, Batesville 72501	793-2321
GS	Lambert, John S	501 Virginia Drive, Batesville 72501	698-1846
FP	Lytle, Jim E.	Post Office Box 2116, Batesville 72501	793-6663
GP	Moody, Lackey G	Post Office Box 2335, Batesville 72501	793-6888
R	McClain, Charles M., Jr.	1490 Byers, Batesville 72501	793-2207
FP	Raney, Troy	Post Office Box 83, Cave City 72521	283-5762
FP	Scott, John G.	Post Office Box 2116, Batesville 72501	793-1126
GP	Slaughter, Bob L.	Post Office Box 2553, Batesville 72501	793-2540
FP	Smith, Bob G.	Post Office Box 2116, Batesville 72501	793-9352
GS	Stalker, James M	Post Office Box 2575, Batesville 72501	793-5205
GS	Strickland, Nathan E.	501 Virginia Drive, Batesville 72501	698-1846
GP	Taylor, Chaney W	Post Office Box 2116, Batesville 72501	793-5251
GP	Taylor, Charles A	Post Office Box 2116, Batesville 72501	793-5251
GP	Tucker, Charles L.	Post Office Box 38, Ash Flat 72513	994-7301
AN	Turner, Samuel R	920 15th Street, Batesville 72501	793-1133

JACKSON COUNTY

IM	Ashley, John D	Second and Laurel, Newport 72112	523-6721
GS	Carney, J. W.	Post Office Box 699, Newport 72112	523-3489
IM	Dudley, Guilford M.	1205 McLain, Newport 72112	523-5272
GS	Frankum, Jerry M., Jr.	Post Office Box 606, Newport 72112	523-6721
GP	Green, Roger L	Post Office Box 159, Newport 72112	523-6721
RD	Harris, M. Haymond	501 Walnut, Newport 72112 (Res.)	523-5168
OBG	Jackson, Jabez F., Jr	1205 McLain, Box A, Newport 72112	523-3289
RD	Jackson, Jabez F	304 Ash, Newport 72112 (Res.)	523-8314
FP	Junkin, A. Bruce	Post Office Box 69, Newport 72112	523-3666
ORS	Lopez, Ramon E.	1902 McLain, Newport 72112	523-2942
GS	Poon, Hon K.	Post Office Box 206, Newport 72112	523-6796
OPH	Stanfield, Wayne	Post Office Box 129, Newport 72112	523-3321
RD	Williams, Thomas E.	12 Park Place, Newport 72112 (Res.)	523-6121
GP	Wright, John C.	1205 McLain, Newport 72112	523-3504
R	Young, Jack S., III	Post Office Box 67, Newport 72112	523-8115

JEFFERSON COUNTY

RD	Adams, Carl H.	Post Office Box 37, Carthage 71725 (Res.)	254-2441
RD	Anderson, Charles W	1411 Olive, Pine Bluff 71601 (Res.)	535-1661
FP	Atnip, Gwyn	1111 West 15th, Pine Bluff 71603	535-3551
FP	Bell, Carl H., Jr	1602 West 42nd, Pine Bluff 71603	535-4850
P	Bishop, Terrell P.	Post Office Box 1796, Pine Bluff 71613	535-4803
ORS	Blackwell, Banks	Post Office Box 1406, Pine Bluff 71613	534-3122
OBG	Bracy, Calvin M.	1301 West 43rd, Pine Bluff 71603	536-7550
U	Brooks, R. Teryl, Jr.	1801 West 40th, Pine Bluff 71603	536-7758
FP	Bryant, R. Frank	1112 Linden, Pine Bluff 71603	534-4352
OTO	Buckley, J. Wayne	1408 West 43rd, Pine Bluff 71603	535-5719
P	Burford, Thomas G.	317 West 46th, Pine Bluff 71601 (Res.)	NF
GE	Butler, Robert C	1801 West 40th, Pine Bluff 71603	536-7660
PUD	Campbell, J. C.	1604 West 42nd, Pine Bluff 71603	536-8507
AN	Carlisle, David L.	1410 West 42nd, Pine Bluff 71603	535-5522
P	Carlton, Irvin L.	Post Office Box 1019, Pine Bluff 71613	534-1834
FP	Cheek, Ben H.	Post Office Box 1285, Pine Bluff 71613	541-7189
PTH	Clark, James F., Jr	1515 West 42nd, Pine Bluff 71603	541-7100
FP	Coker, L. Randle	Post Office Box 276, Star City 71667	628-4292
IM	Crenshaw, John	4201 Mulberry, Pine Bluff 71603	535-2200
D	Davis, Charles M.	1416 West 43rd, Pine Bluff 71603	535-7477
IM	Dedman, John D	4201 Mulberry, Pine Bluff 71603	535-2200
CD	Deneke, William A	1612 West 42nd, Pine Bluff 71603	536-3015
OBG	Devi, Talluri S	1801 West 40th, Pine Bluff 71603	536-0974
GS	Dickins, Robert D., Sr.	1003 Cherry, Pine Bluff 71601	534-8141
EM	Edmiston, Frank G	Jefferson Regional Medical Center, Pine Bluff 71603	541-7100
R	Fendley, Claude E.	Post Office Box 7863, Pine Bluff 71611	534-8651
R	Fuller, C. J	Post Office Box 7863, Pine Bluff 71611	534-8651
OPH	Glasscock, R. E.	3218 Elm, Pine Bluff 71603 (Res.)	535-6438
PD	Green, Horace L.	1420 West 43rd, Pine Bluff 71603	534-6210
IM	Green, Linda Haynie	1710 Doctors Drive, Pine Bluff 71603	534-6570
ORS	Gullett, Robert R., Jr.	1801 West 40th, Pine Bluff 71603	536-7579
R	Hardin, J. David	Post Office Box 7863, Pine Bluff 71611	535-8651
IM	Harper, William F.	1801 West 40th, Pine Bluff 71603	536-9230
PD	Hart, J. Clyde, Jr	1420 West 43rd, Pine Bluff 71603	534-6210
R	Hegwood, Henri M	Post Office Box 7863, Pine Bluff 71611	534-8651
EM	Henderson, Francis M.	120 South Walnut, Pine Bluff 71601	535-0855
RD	Herron, John T.	2824 Foxcroft Road, Little Rock 72207 (Res.)	227-9484
IM	Hoover, S. H.	1706 West 42nd, Pine Bluff 71603	536-7300
OPH	Hughes, L. Milton	1414 West 43rd, Pine Bluff 71603	536-7738
FP	Hussain, Shafqat	1801 West 40th, Pine Bluff 71603	535-4640
U	Hutchison, E. L.	1724 West 42nd, Pine Bluff 71603	535-1562
OBG	Hyman, Carl E.	121 East 4th, Pine Bluff 71601	534-3365
N	Ingram, Thomas E.	1726 Doctors Drive, Pine Bluff 71603	535-4803
GS	Irwin, Raymond A., Jr.	1220 West 42nd, Pine Bluff 71603	535-2100
U	Jacks, David C.	1724 Doctors Drive, Pine Bluff 71603	535-4221
P	James, William J	Post Office Box 1019, Pine Bluff 71613	534-1834
CD	Jenkins, B. J	1612 West 42nd, Pine Bluff 71603	536-3015
AN	Jenkins, Mary Ellen	1410 West 42nd, Pine Bluff 71603	535-5522
GS	Johnson, Horace	2526-B East Harding, Pine Bluff 71601	534-3910
R	Joseph, Aubrey S	Post Office Box 7863, Pine Bluff 71611	534-8651
FP	Justiss, Richard D.	1222 West 42nd, Pine Bluff 71603	535-1819
OBG	Kaipa, Siva P.	1708 Doctors Drive, Pine Bluff 71603	535-1025
AN	Khan, Mahmood A.	1410 West 42nd, Pine Bluff 71603	535-5522

Type of Practice	Member's Name	Address	Telephone Number
GS	King, Errol G	1515 West 42nd, Pine Bluff 71603	541-7100
OPH	King, Yum Y	4800 South Hazel, Pine Bluff 71603	536-1897
P	Kumar, Ganesh	Post Office Box 1019, Pine Bluff 71613	534-1834
OTO	Langston, Lloyd G	1408 West 43rd, Pine Bluff 71603	535-5719
GS	Ligon, Ralph E.	1801 West 40th, Pine Bluff 71603	534-4188
FP	Lindsey, James A	1222 West 42nd, Pine Bluff 71603	535-1819
ORS	Lipscomb, Larry G	1801 West 40th, Pine Bluff 71603	536-7579
D	Lum, Don	4301 Mulberry, Pine Bluff 71603	541-0400
GS	Mabry, Charles D	1716 West 42nd, Pine Bluff 71603	535-8280
FP	Maynard, Ross E.	303 National Building, Pine Bluff 71601	534-5732
NEP	Mehta, Shyam P.	1600 West 42nd, Pine Bluff 71603	536-6105
GS	Meredith, William R.	1704 West 42nd, Pine Bluff 71603	535-8727
ADM	Miller, Donald L.	1515 West 42nd, Pine Bluff 71603	541-7290
R	Milligan, Monte C.	Route 1, Box 640, Pine Bluff 71603 (Res.)	879-2798
RD	Monroe, Sanford C.	1600 West 35th, Pine Bluff 71603 (Res.)	534-1130
FP	Morris, Harold J.	1030 Poplar, Pine Bluff 71601	534-0822
R	McDonald, Robert L	Post Office Box 7863, Pine Bluff 71611	534-8651
OPH	McFarland, Mike S	1801 West 40th, Pine Bluff 71603	536-4100
	McKinney, Daniel C.	Springfield, Missouri	
OPH	Nixon, William R	709 West 6th, Pine Bluff 71601	534-2624
IM	Nuckolls, J. William	1801 West 40th, Pine Bluff 71603	541-0222
CD	Pearce, Malcolm B.	1612 West 42nd, Pine Bluff 71603	536-3015
FP	Perry, V. Bryan	1722 West 42nd, Pine Bluff 71603	535-4141
OBG	Pierce, J. R., Jr	1712 West 42nd, Pine Bluff 71603	535-3443
	Ramsey, David M., III	Sylva, North Carolina	
FP	Raney, O. C	1720 West 42nd, Pine Bluff 71603	534-5861
ORS	Reed, E. Frank	916 Cherry, Pine Bluff 71601	535-0121
PD	Reid, Lloyene B	1420 West 43rd, Pine Bluff 71603	534-6210
GS	Rittelmeyer, Clarence M.	1704 West 42nd, Pine Bluff 71603	535-8727
OBG	Roaf, Sterling A	1310 Linden, Pine Bluff 71603	536-4602
GS	Roberson, George V	1801 West 40th, Pine Bluff 71603	535-2716
FP	Robinette, Joseph S	1718 Doctors Drive, Pine Bluff 71603	535-2372
GE	Rogers, Henry L.	1801 West 40th, Pine Bluff 71603	536-7660
OBG	Ross, Robert L.	1305 West 43rd, Pine Bluff 71603	534-8993
AN	Samuel, Ferdinand K.	Post Office Box 1272, Pine Bluff 71613	535-7457
GYN	Simmons, Calvin R	1714 West 42nd, Pine Bluff 71603	535-3213
NS	Simpson, P. B., Jr.	1801 West 40th, Pine Bluff 71603	536-8547
PD	Smith, Paul L.	Post Office Box 1648, Pine Bluff 71613	536-4566
GS	Smith, Robert J	817 Cherry, Pine Bluff 71601	535-1880
RD	Stern, Howard S	2404 West 47th, Pine Bluff 71603 (Res.)	534-8281
GS	Sullenberger, A. G	1726 West 42nd, Pine Bluff 71603	534-4407
PTH	Tisdale, Alfred D., Jr.	1515 West 42nd, Pine Bluff 71603	541-7160
PD	Townsend, Thomas E.	1420 West 43rd, Pine Bluff 71603	534-6210
IM	Tracy, C. Clyde	4201 Mulberry, Pine Bluff 71603	535-2200
FP	Waheed, Atiya N	1608 West 42nd, Pine Bluff 71603	536-9700
GS	Wilkins, Walter J., Jr.	1220 West 42nd, Pine Bluff 71603	535-2100
IM	Wineland, Herbert L	1710 West 42nd, Pine Bluff 71603	534-3561
A	Worrell, Aubrey M., Jr	3900 Hickory, Pine Bluff 71603	535-8200
FP	Yalamanchili, R. R.	1421 Cherry, Pine Bluff 71601	541-0770

JOHNSON COUNTY

FP	Fraser, Robert E.	Post Office Box 668, Clarksville 72830	754-8384
FP	McAuley, John R	Post Office Box 668, Clarksville 72830	754-8384
GS	McKelvey, Richard E.	Post Office Box 440, Clarksville 72830	754-6510
FP	Patterson, Jack T	Post Office Box 668, Clarksville 72830	754-8384
FP	Pennington, Donald H.	Post Office Box 668, Clarksville 72830	754-8384
GP	Shrigley, Guy P	Post Office Box 70, Clarksville 72830	754-2043
FP	Taylor, George W.	Post Office Box 668, Clarksville 72830	754-8384
GP	West, Boyce W	Post Office Box 220, Clarksville 72830	754-6661

LAFAYETTE COUNTY

GP	Ditsch, Craig E.	Post Office Box 276, Stamps 71860	533-4461
RD	Lee, Willie J.	3104 Crestridge, Texarkana 75503 (Res.)	214-793-2815

LAWRENCE COUNTY

GP	Cruse, Edward J.	Post Office Box 116, Black Rock 72415	878-6209
RD	Dickey, A. B.	704 Northwest 3rd, Walnut Ridge 72476 (Res.)	886-5377
GP	Elders, J. B	Post Office Box 595, Walnut Ridge 72476	886-3162
FP	Hughes, Joe E.	Post Office Box 719, Walnut Ridge 72476	886-3543
IM	Joseph, Ralph F.	Post Office Box 109, Walnut Ridge 72476	886-3211
FP	Lancaster, Ted S	Post Office Box 719, Walnut Ridge 72476	886-3543
R	Smoot, John D.	Post Office Box 934, Jonesboro 72401	932-9022
FP	Spades, S. A.	Post Office Box 719, Walnut Ridge 72476	886-3543
GS	Wilson, Stephen K	Post Office Box 591, Walnut Ridge 72476	886-6409

LEE COUNTY

GP	Fields, E. C.	77 West Main, Marianna 72360	295-5244
FP	Gray, Dwight W.	110 West Chestnut, Marianna 72360	295-3131
GP	Ly, Duong Ngoc	29 West Tennessee, Marianna 72360	295-2543
GP	Waddy, Leon M., Jr.	Post Office Box 603, Marianna 72360	295-5908

LITTLE RIVER COUNTY

FP	Armstrong, James D	Post Office Box 637, Ashdown 71822	898-3306
IM	Gillean, John A	Post Office Box 818, Ashdown 71822	898-5036
GP	Gillean, Myra M.	Post Office Box 818, Ashdown 71822	898-5036
RD	Peacock, Norman W., Jr.	Route 2, Ashdown 71822 (Res.)	898-3353
FP	Shelton, Joe G., Jr.	Post Office Box 697, Ashdown 71822	898-3306

LOGAN COUNTY

GP	Baskerville, Jerry Ray	Post Office Box 625, Paris 72855	963-2132
GP	Daniel, William R	Post Office Box 110, Booneville 72927	675-2455
FP	Enns, W. P.	Post Office Box 625, Paris 72855	963-2132
GP	Harbison, James D.	Post Office Box 327, Booneville 72927	675-2121
FP	Roberts, William J.	Post Office Box 110, Booneville 72927	675-2455
GP	Smith, James T	Post Office Box 286, Paris 72855	963-2191
GP	Ulrich, Guy	Post Office Box 626, Paris 72855	963-6181
FP	Williams, John R	Post Office Box 110, Booneville 72927	675-2455

LONOKE COUNTY

FP	Abrams, Joe A	Post Office Box 993, Cabot 72023	843-6528
FP	Braswell, Tommy R.	Post Office Box 130, England 72046	842-2597

Type of Practice	Member's Name	Address	Telephone Number
FP	Camp, Arthur W.	Post Office Box 547, Hazen 72064	255-3321
GP	Gartman, Joseph F.	Post Office Box 450, Carlisle 72024	552-3221
GP	Harris, Willie R.	Post Office Box 40, England 72046	842-2553
GP	Holmes, Byron E.	305 West Front, Lonoke 72086	676-6560
FP	Inman, Fred C., Jr.	Post Office Box K, Carlisle 72024	552-7575
OM	Kimsey, Warren H	Remington Arms Company, Lonoke 72086	676-3161
GP	Schumann, Gerald M.	Post Office Drawer A, Des Arc 72040 (Res.)	256-4312
GP	Washburn, C. Yulan	Route 1, Box 877, Ward 72176 (Res.)	843-3335

MILLER COUNTY

R	Andrews, A. E.	Post Office Box 689, Texarkana 75501	774-2121
GS	Barnes, Walter C.	300 East Sixth, Texarkana 75502	774-3211
NS	Bohmfalk, George L.	1001 Main, Texarkana 75501	214-794-4196
GS	Bransford, Robert M.	300 East Sixth, Texarkana 75502	774-3211
IM	Burnett, James W	414 Hazel, Texarkana 75502	774-7301
PD	Burroughs, James C.	300 East Sixth, Texarkana 75502	774-3211
FP	Dildy, Edwin V	Post Office Box 1409, Texarkana 75504	214-792-7151
OBG	Druff, Gerald H.	300 East Sixth, Texarkana 75502	774-3211
GS	Duncan, Donald L.	300 East Sixth, Texarkana 75502	774-3211
ORS	Green, Barry M.	1423 Main, Texarkana 75501	214-794-3661
PD	Hall, Jon D	300 East Sixth, Texarkana 75502	774-3211
OM	Harrell, William B., Jr.	Post Office Box 2078, Texarkana 75501	214-792-8231
FP	Harris, C. Lynn	Post Office Box 1409, Texarkana 75504	214-792-7151
OBG	Harrison, Jack W.	300 East Sixth, Texarkana 75502	774-3211
GYN	Harrison, James W	300 East Sixth, Texarkana 75502	774-3211
GE	Hughes, Keith	300 East Sixth, Texarkana 75502	774-3211
RD	Hughes, R Paul	3935 Texas Boulevard, Texarkana 75503 (Res.)	214-793-3385
IM	Hutcheson, Fred A., Jr.	300 East Sixth, Texarkana 75502	774-3211
GYN	Jones, John Walter	300 East Sixth, Texarkana 75502	774-3211
PTH	Joyce, Frederick E.	Post Office Box 2763, Texarkana 75504	774-2121
GS	Kemp, Karlton H	408 Hazel, Texarkana 75502	774-5181
FP	Kittrell, James B	600 Walnut, Texarkana 75502	774-7236
RD	Laws, J. K.	Post Office Box 1378, Texarkana 75504 (Res.)	772-1209
R	Leavelle, Ray W	3300 Rhozine, Texarkana 75503	214-794-4756
D	Loe, Arlis W.	Post Office Box 1409, Texarkana 75504	214-792-7151
PD	Meredith, Paul D.	Post Office Box 1409, Texarkana 75504	214-792-7151
R	McGinnis, Robert S.	Post Office Box 1409, Texarkana 75504	214-792-7151
IM	Rodgers, Nathaniel L.	300 East Sixth, Texarkana 75502	774-3211
U	Rountree, Glen A.	300 East Sixth, Texarkana 75502	774-3211
R	Royal, Jack L.	300 East Sixth, Texarkana 75502	774-3211
OTO	Shipp, G. Carl	4214 Texas Boulevard, Texarkana 75503	214-793-0691
FP	Short, Harold H	1400 College Drive, Texarkana 75503	214-793-5671
GP	Stringfellow, Jerry B.	1205 East 35th, Texarkana 75502	773-6745
RD	Teasley, Gerald H	504 East 24th, Texarkana 75502 (Res.)	214-794-5245
GS	Tompkins, W. C.	300 East Sixth, Texarkana 75502	774-3211
	Wilhelm, Frieda	(Address unknown)	
TS	Wren, Herbert B	4800 Texas Boulevard, Texarkana 75501	214-792-7151
RD	Yarbrough, Charles P	Route 8, Box 573, Texarkana 75503 (Res.)	214-794-4744
GS	Young, Mitchell	1406 College Drive, Texarkana 75503	214-792-8264

MISSISSIPPI COUNTY

D	Abramson, Lawrence J.	10th and Highland, Blytheville 72315	763-3330
OPH	Aviner, Zvi	10th and Highland, Blytheville 72315	763-2648
OBG	Bell, Mary C.	527 North Sixth, Blytheville 72315	763-8890
FP	Biggerstaff, Jerry R.	608 West Lee, Osceola 72370	563-3576
IM	Brock, Charles C., Jr	605 North Second, Blytheville 72315	763-1520
U	Campbell, C. E., Jr	609 Fulton, Blytheville 72315	763-0855
FP	Cole, Cecil R.	519 North Sixth, Blytheville 72315	763-1554
GP	Cook, Joel P.	Post Office Box 626, Osceola 72370	563-3033
GP	Cullom, S Reggie	700 West Keiser, Osceola 72370	563-6512
GP	Elliott, John O.	Post Office Box 747, Blytheville 72315	763-4548
GP	Fairley, Eldon	Post Office Box 68, Osceola 72370	563-6568
GS	Fergus, R. Scott	Professional Building, Osceola 72370	563-3248
R	Gratz, John F., Jr.	135 North Pauline, Memphis, Tennessee 38105	901-527-5211
GP	Green, W. O., Jr	Post Office Box 268, Blytheville 72315	763-6802
GS	Harmon, Harvey C.	10th and Highland, Blytheville 72315	763-1307
PTH	Hart, Sybil	Post Office Box 312, Blytheville 72315	762-3346
GP	Holcomb, Cecil E.	511 North Sixth, Blytheville 72315	763-3922
#	Hubener, L. L.	Blytheville	
	Hubener, Louis F.	Gainesville, Florida	
PTH	Husted, G. Scott	10th and Highland, Blytheville 72315	762-3345
IM	Jones, Herbert	Post Office Box 321, Blytheville 72315	763-8032
IM	Jones, Joseph V.	605 North Second, Blytheville 72315	763-1520
RD	Massey, L. D.	4367 East Mallory, Memphis, Tennessee 38117 (Res.)	901-761-9057
OBG	Melton, C. G	10th and Highland, Blytheville 72315	763-4251
FP	Osborne, Merrill J.	1533 North Tenth, Blytheville 72315	762-5360
GP	Pollock, George D.	608 West Lee, Osceola 72370	563-3576
FP	Rhodes, R. F.	608 West Lee, Osceola 72370	563-3576
GP	Rodman, Tasken N.	Post Office Box 260, Leachville 72438	539-6337
GS	Sellers, Kenneth D.	10th and Highland, Blytheville 72315	763-1307
FP	Shaneytelt, E. A.	14th and McHaney, Blytheville 72315	763-3288
GS	Sims, Hunter C., Jr.	525 North Tenth, Blytheville 72315	763-0521
FP	Smith, Ronald D.	620 West Walnut, Blytheville 72315	763-4541
OPH	Webb, Jack J	Post Office Box 547, Blytheville 72315	762-2131
OBG	Workman, W. Wayne	527 North Sixth, Blytheville 72315	763-8890

MONROE COUNTY

FP	David, Neylon C., Jr	108 West Ash, Brinkley 72021	734-2212
GP	Miya, Robert T.	106 North New York, Brinkley 72021	734-4847
GP	Pupsta, Benedict F.	Post Office Box 250, Clarendon 72029	747-3321
GP	Stone, Herd E.	Post Office Box A, Holly Grove 72069	462-3393
GP	Walker, Walter L.	Post Office Box 151, Brinkley 72021	734-3242
FP	Williams, J. P., Jr	127 South New Orleans, Brinkley 72021	734-1331

NEVADA COUNTY

GP	Avery, Charles D.	427 East 6th, Prescott 71857	887-2625
GS	Corbell, Carroll E.	Post Office Box 582, Prescott 71857	887-6687
GP	Crow, H. Blake	327 East 2nd South, Prescott 71857	887-3846
RD	Hairston, Glenn G.	327 East 3rd South, Prescott 71857 (Res.)	887-2155
FP	Portis, Richard P.	301 Hale Avenue, Prescott 71857	887-6651
FP	Russell, James T.	301 Hale Avenue, Prescott 71857	887-6651
FP	Young, Michael C.	301 Hale Avenue, Prescott 71857	887-6651

Type of Practice	Member's Name	Address	Telephone Number
		OUACHITA COUNTY	
IM	Dedman, J. L.	415 Hospital Drive, Camden 71701	836-5013
EM	Dobson, Jack T.	2026 Parkwood Lane, Fordyce 71742	352-2488
AN	Ellis, Joseph L.	Post Office Box 126, Camden 71701	836-7144
GS	Fohn, Charles H	415 Hospital Drive, Camden 71701	836-5013
GP	Guthrie, James	Post Office Box 757, Camden 71701	836-8101
FP	Hout, Judson N	Post Office Box 757, Camden 71701	836-8101
GS	Jameson, J. B	Post Office Box 994, Camden 71701	836-5088
FP	Kendall, J. R	Post Office Box 757, Camden 71701	836-8101
FP	Livingston, Billy B	225 Jackson, Camden 71701	836-7367
FP	Miller, John H	Post Office Box 851, Hampton 71744	798-4299
FP	Nunnally, Robert H	Post Office Box 757, Camden 71701	836-8101
IM	Ozment, L. V	Post Office Box 757, Camden 71701	836-8101
GYN	Plant, Richard F	Post Office Box 762, Camden 71701	836-4169
FP	Sanders, Cal R.	Post Office Box 757, Camden 71701	836-8101
R	Thorne, A. E.	Post Office Box 797, Camden 71701	836-1221
		PHILLIPS COUNTY	
GP	Barrow, J. H	614 Oakland, Helena 72342	338-8622
FP	Bell, L. J. Pat	626 Poplar, Helena 72342	338-8163
OPH	Berger, A. A	801 Perry, Helena 72342	338-8781
FP	Capes, Bernard	Post Office Box 2398, West Helena 72390	572-2621
GP	Ellis, William A., Jr.	603 Porter, Helena 72342	338-3037
GS	Elovitz, Maurice	Post Office Box 808, Helena 72342	338-7218
GP	Faulkner, Henry N	513 Porter, Helena 72342	338-7401
GP	Kirkman, C. M. T.	1105 Perry, Helena 72342	338-8712
R	Kordan, Bernard	Post Office Box 556, Helena 72342	338-6411
FP	Miller, Robert D.	616 Elm, Helena 72342	338-8531
GP	McCarty, Charles P.	513 Porter, Helena 72342	338-7401
FP	McCarty, G. Eddie, Jr.	107 Hickory Hill, Helena 72342	338-8377
GP	McDaniel, Marion A.	Post Office Box 769, Helena 72342	338-8308
GP	Paine, William T	661 Oakland, Helena 72342	572-6413
PTH	Patton, Francis M.	Post Office Box 511, Helena 72342	338-6411
GP	Pham, Anh N.	4014 West Sixth, Little Rock 72205 (Res.)	661-9823
AN	Vasudevan, Kanaka	133-A Newman Drive, Helena 72342	338-6749
U	Vasudevan, P.	133-A Newman Drive, Helena 72342	338-6749
OBG	Whaley, Lance D	671 Oakland, Helena 72342	572-1094
GP	Wise, James E., Jr	Post Office Box 66, Marvell 72366	829-2386
		POLK COUNTY	
R	Baldwin, Michael H	Wilhelmina Medical Center, Mena 71953	394-6100
EM	Bell, James P	1311 South "I", Fort Smith 72901	441-5011
FP	Fried, David D	Route 3, Box 194, Mena 71953	394-5880
GP	Hefner, David P	518 Janssen, Mena 71953	394-3550
RD	Moore, Walter M.	54 Oaklawn Drive, Mena 71953 (Res.)	394-2148
GP	Redman, Pierre P	513 Mena, Mena 71953	394-2277
GP	Rogers, Henry N	600 West 7th, Mena 71953	394-3345
FP	Stephens, Maurice L.	Route 3, Box 168, Mena 71953	394-6300
GS	Wood, John P.	907 Mena, Mena 71953	394-4221
		POPE COUNTY	
FP	Ashcraft, Ted E.	Post Office Box 1597, Russellville 72801	968-7170
OTO	Austin, Nathan F.	2504 West Main, Russellville 72801	968-5261
GS	Bachman, David S.	3105 West Main Place, Russellville 72801	968-2345
OBG	Battles, Larry D.	3105 West Main Place, Russellville 72801	968-2345
U	Bell, Robert A.	2301 West Main, Russellville 72801	968-3323
IM	Berner, Dennis W	3105 West Main Place, Russellville 72801	968-2345
AN	Birum, Patricia J.	Post Office Box 785, Russellville 72801	968-5670
PD	Bost, R. Kingsley	3105 West Main Place, Russellville 72801	968-2345
U	Brown, Charles H.	2301 West Main, Russellville 72801	968-3323
R	Burgess, James G.	Post Office Box 1647, Russellville 72801	968-7930
FP	Carter, James M.	3105 West Main Place, Russellville 72801	968-2345
GS	Crumpler, Joe B.	3105 West Main Place, Russellville 72801	968-2345
OBG	Dunn, Donald L.	3105 West Main Place, Russellville 72801	968-2345
D	Galloway, William W	1602 West Main, Russellville 72801	968-6969
#	Gavlas, Frank E.	Dardanelle	
IM	Guy, Ronald E.	2504 West Main, Russellville 72801	968-2090
FP	Henry, J. Arnold	3105 West Main Place, Russellville 72801	968-2345
IM	Hill, Donald F.	3105 West Main Place, Russellville 72801	968-2345
ORS	Honghiran, Ted	2504 West Main, Russellville 72801	968-3200
GS	Kimball, G. Howard	1919 West Main, Russellville 72801	968-3611
R	King, John W	Post Office Box 1647, Russellville 72801	968-7930
GP	King, W. Ernest, Jr.	3105 West Main Place, Russellville 72801	968-2345
ORS	Kolb, James M., Jr.	305 Skyline Drive, Russellville 72801	968-2124
FP	Lane, W. H., Jr.	Post Office Box 324, Dover 72837	331-2828
OPH	Lawrence, Frank M.	Post Office Box 400, Russellville 72801	968-2242
OPH	Lovell, Richard K., Sr.	Post Office Box 1107, Russellville 72801	968-7302
FP	Lowrey, Douglas H.	809 West Main, Russellville 72801	968-2156
OPH	Lyford, Joe H., Jr	Post Office Box 1107, Russellville 72801	968-7302
GP	Malone, G. E.	Post Office Box 187, Atkins 72823	641-2992
FP	Mauch, E. Jane	3105 West Main Place, Russellville 72801	968-2345
ORS	May, Robert H.	305 Skyline Drive, Russellville 72801	968-7711
FP	Meyer, Kelly H.	Post Office Box 1597, Russellville 72801	968-7170
RD	Millard, Roy I.	1704 West Third Court, Russellville 72801 (Res.)	968-2604
OPH	Mobley, Max J.	Post Office Box 400, Russellville 72801	968-2242
GS	Myers, James M.	3105 West Main Place, Russellville 72801	968-2345
#	McNamara, William L.	Russellville	
FP	New, Kenneth O.	3105 West Main Place, Russellville 72801	968-2345
R	Riley, Don C.	Post Office Box 1647, Russellville 72801	968-7930
PTH	Stolz, Gerald A., Jr.	Post Office Box 925, Russellville 72801	968-6781
FP	Teeter, Stanley D.	3105 West Main Place, Russellville 72801	968-2345
IM	Thurlby, W. Robert	3105 West Main Place, Russellville 72801	968-2345
FP	Turner, Finley P., II	Post Office Box 1598, Russellville 72801	968-2156
IM	Wilkins, Charles F., Jr.	3105 West Main Place, Russellville 72801	968-2345
GP	Williams, David M.	Post Office Box 1598, Russellville 72801	968-2156
EM	Young, Sandra S.	1800 West Main, Russellville 72801	968-2841
		PULASKI COUNTY	
RD	Abbott, William W.	1204 Biscayne Drive, Little Rock 72207 (Res.)	225-2882
IM	Abraham, James H.	10001 Lile Drive, Little Rock 72205	227-8000
NS	Adametz, John H.	750 Medical Towers Building, Little Rock 72205	225-0880
PUD	Adamson, James S	890 Medical Towers Building, Little Rock 72205	224-0110
OPH	Alford, T. Dale	5700 West Markham, Little Rock 72205	664-5100
OBG	Allen, D. B.	500 South University, Little Rock 72205	664-4131
GYN	Allen, E. Stewert	1100 North University, Little Rock 72207	664-9191
CDS	Allen, John E., Jr.	1050 Medical Towers Building, Little Rock 72205	227-8300

Type of Practice	Member's Name	Address	Telephone Number
PS	Allen, Thomas H. "Bill"	413 North University, Little Rock 72205	664-0900
IM	Amir, Jacob	10001 Lile Drive, Little Rock 72205	227-8000
FP	Anderson, Leslie F.	1310 North Center, Lonoke 72086	676-5123
PTH	Araoz, Carlos A.	#1 St. Vincent Circle, Suite 220, Little Rock 72205	661-4116
OM	Armstrong, Howard M.	340 Doctors Park Building, Little Rock 72205	227-7888
PD	Arrington, Robert W.	804 Wolfe, Little Rock 72201	371-9188
AN	Ashcraft, Keith E.	500 South University, Little Rock 72205	661-4180
RD	Ault, Charles C.	#3 Helen Drive, Sherwood 72116 (Res.)	835-1046
RD	Autry, Daniel H	1900 North Tyler, Little Rock 72207 (Res.)	664-2332
**R	Aydelotte, George	4301 West Markham, Little Rock 72201	661-5740
U	Babaian, Richard J.	4301 West Markham, Little Rock 72201	661-5240
GS	Baber, John C.	500 South University, Little Rock 72205	664-2434
GE	Baber, John T.	500 South University, Little Rock 72205	663-9420
P	Backus, Joe T.	12115 Hinson Road, Little Rock 72212	227-0680
OT	Bailey, H. A. Ted, Jr	1200 Medical Towers Building, Little Rock 72205	227-5050
U	Baker, Johnson J.	500 South University, Little Rock 72205	664-4364
IM	Baker, Susan W.	11215 Hermitage Road, Little Rock 72211	225-2661
PD	Baldwin, Deane G.	500 South University, Little Rock 72205	664-4044
OBG	Baldwin, Maxwell R.	880 Medical Towers Building, Little Rock 72205	224-5050
FP	Ballard, C. E., Jr.	4202 South University, Little Rock 72204	562-4838
GYN	Barclay, David L.	500 South University, Little Rock 72205	664-8502
GYN	Bard, David S.	4301 West Markham, Little Rock 72201	661-5923
FP	Barg, Charles D.	100 Doctors Park Building, Little Rock 72205	224-5220
CD	Barlow, Brian E.	#1 St. Vincent Circle, Suite 450, Little Rock 72205	664-5860
U	Barnett, Troy F.	#1 St. Vincent Circle, Suite 320, Little Rock 72205	664-1762
ORS	Barnett, David C.	110 Doctors Park Building, Little Rock 72205	227-4150
R	Barnhard, Howard J.	4301 West Markham, Little Rock 72201	661-5740
FP	Barron, Edwin N., Jr.	10121 Rodney Parham Road, Little Rock 72207	225-9222
OBG	Batres, Francisco	500 South University, Little Rock 72205	664-4131
GS	Bauer, Frank M.	500 South University, Little Rock 72205	664-2245
R	Bearden, James R.	1100 Medical Towers Building, Little Rock 72205	227-5240
OPH	Becquet, Norbert J.	115 West 6th, Little Rock 72201	375-4419
FP	Belknap, Melvin L.	1801 Maple, North Little Rock 72114	758-1002
RD	Bennett, Eaton W.	1003 Loretta Lane, Little Rock 72207 (Res.)	225-2478
CD	Bennett, F. Anthony, Jr.	650 Shackleford Road, Little Rock 72211	224-9001
TS	Berry, Frederick B.	1060 Medical Towers Building, Little Rock 72205	224-3424
OPH	Berry, Robert L.	1000 Medical Towers Building, Little Rock 72205	227-6980
EM	Bethell, John P., Jr.	610 West Sugarloaf, Heber Springs 72543 (Res.)	362-2660
P	Betts, Charles S.	2024 Arkansas Valley Drive, Little Rock 72212	225-8998
GS	Bevans, David W., Jr.	406 Pershing, North Little Rock 72114	758-1620
OTO	Billie, James D.	1200 Medical Towers Building, Little Rock 72205	227-5050
R	Binet, Eugene F.	300 East Roosevelt Road, Little Rock 72206	372-8361
D	Biondo, Raymond V.	Post Office Box 921, North Little Rock 72115	758-2588
CD	Bishop, William B.	10001 Lile Drive, Little Rock 72205	227-8000
U	Black, Hal R., Jr.	200 Doctors Park Building, Little Rock 72205	225-9755
GP	Black, H. Thurston	10 Armistead Road, Little Rock 72207 (Res.)	664-4759
GE	Blackshear, Jack L.	650 Medical Towers Building, Little Rock 72205	227-8074
ORS	Blankenship, William F.	1100 North University, Little Rock 72207	664-5720
PD	Boellner, Samuel W.	300 Medical Towers Building, Little Rock 72205	227-4750
CD	Boger, James E.	Post Office Box 5600, Little Rock 72215	227-7596
NS	Boop, Warren C., Jr.	4301 West Markham, Little Rock 72201	661-5270
N	Bornhofen, John H.	300 Medical Towers Building, Little Rock 72205	227-4750
PD	Bost, Roger B.	4301 West Markham, Little Rock 72201	661-5260
	Bowker, John H.	Coral Gables, Florida	
NM	Boyd, Charles M.	4301 West Markham, Little Rock 72201	661-5760
U	Bradburn, Curry B.	200 Doctors Park Building, Little Rock 72205	225-9755
OPH	Brainard, Jay O.	405 North University, Little Rock 72205	664-5354
R	Brenner, George H., Jr.	1100 Medical Towers Building, Little Rock 72205	227-2180
D	Bressinck, Renie E.	950 Medical Towers Building, Little Rock 72205	227-8422
NEP	Brewer, Thomas E.	5326 West Markham, Little Rock 72205	664-4653
RD	Briggs, Barnett P.	2805 Foxcroft Square, #403, Little Rock 72207 (Res.)	225-1203
PD	Briggs, Dale D.	11215 Heritage Road, Little Rock 72211	225-9038
IM	Brinkley, Roy A.	220 Doctors Park Building, Little Rock 72205	227-6350
OTO	Brizzolara, A. J.	500 South University, Little Rock 72205	664-4381
P	Broach, R. Fred	12115 Hinson Road, Little Rock 72212	227-0680
RD	Brown, Martha M.	(Address unknown)	
GE	Browning, Donald G.	409 North University, Little Rock 72205	664-6980
AN	Browning, Stanley K.	10825 Financial Centre Parkway, Little Rock 72211	227-7590
ADM	Bruce, Thomas A.	4301 West Markham, Little Rock 72201	661-5350
RD	Buchanan, Francis R.	44 Pine Manor, Little Rock 72207 (Res.)	664-6557
PD	Buchanan, Gilbert A.	500 South University, Little Rock 72205	664-4117
GS	Buchman, Joseph A.	500 South University, Little Rock 72205	664-9116
GS	Buchman, J. K.	500 South University, Little Rock 72205	664-9116
IM	Bucolo, Anthony P.	1000 North University, Little Rock 72207	661-0060
FP	Buford, Joe Lee	1801 Maple, North Little Rock 72114	758-1002
AN	Bumpas, Joe H.	500 South University, Little Rock 72205	664-4532
PTH	Burger, Robert A.	9600 West 12th, Little Rock 72201	227-2888
TS	Burnett, Hugh F.	990 Medical Towers Building, Little Rock 72205	227-9080
FP	Burnham, William W.	1310 Cantrell, Little Rock 72201	375-5381
FP	Burrow, Dennis R.	550 Edgewood, Maumelle 72118	851-2170
RD	Busby, John V.	8306 Louwanda, Little Rock 72205 (Res.)	227-0405
RD	Byrd, Lucas M., Jr.	36 Lakeshore Drive, Little Rock 72204 (Res.)	565-6046
OPH	Calcote, Robert A.	2500 McCain Place, North Little Rock 72116	771-1166
GS	Caldwell, Fred T., Jr.	4301 West Markham, Little Rock 72201	661-6173
FP	Calhoon, J. Dale	Post Office Box 805, Jacksonville 72076	982-4551
R	Calhoun, Joseph D.	500 South University, Little Rock 72205	661-3671
FP	Calhoun, Richard A.	330 Doctors Park Building, Little Rock 72205	227-6363
TS	Campbell, Gilbert S.	4301 West Markham, Little Rock 72201	661-6177
R	Campbell, James W.	500 South University, Little Rock 72205	664-3914
A	Caplinger, Kelsy J.	11215 Hermitage Road, Little Rock 72211	224-1156
RD	Carnahan, Robert G.	12660 Rivercrest Drive, Little Rock 72212 (Res.)	224-2274
FP	Carson, Layne E.	300 East Roosevelt Road, Little Rock 72206	372-8361, Ext. 1585
FP	Carter, Jerry L.	12361 Hinson Road, Little Rock 72212	224-2875
R	Caruthers, Samuel B., Jr.	1100 Medical Towers Building, Little Rock 72205	227-5240
TS	Casali, Robert E.	200 Medical Towers Building, Little Rock 72205	224-5666
RD	Cazort, Alan G.	5117 Edgewood, Little Rock 72207 (Res.)	663-3623
ORS	Chakales, Harold H.	405 North University, Little Rock 72205	664-7005
OPH	Chandler, Billy M.	406 Pershing, North Little Rock 72114	758-1651
FP	Chapman, Jerry C.	Post Office Box M, Cabot 72023	843-6585
RD	Chappell, Ewin S.	400 North University, Little Rock 72205 (Res.)	663-4747
FP	Cheairs, David B.	330 Doctors Park Building, Little Rock 72205	227-6363
R	Chisholm, Dan P.	500 South University, Little Rock 72205	664-3915
PD	Choate, Robert B.	516 Pershing, North Little Rock 72114	758-1530
RD	Christeson, William W.	7 Sunset Circle, Little Rock 72207 (Res.)	666-0566
ORS	Christian, John D.	1100 North University, Little Rock 72207	664-7710
FP	Chudy, Amail	1801 Maple, North Little Rock 72114	758-1002
FP	Church, B. L.	Post Office Box 246, North Little Rock 72115	753-3130

Type of Practice	Member's Name	Address	Telephone Number
OBG	Church, Marion M.	410 Pershing, North Little Rock 72114	758-1022
AN	Clark, Richard B	4301 West Markham, Little Rock 72201	661-6117
OPH	Clifton, Ernest C "Cliff"	516 Scott, Little Rock 72201	374-6338
FP	Cobb, Jock S	North Hills Family Clinic, Sherwood 72116	835-6800
R	Cockrill, H Howard, Jr	500 South University, Little Rock 72205	664-3914
OTO	Colclasure, Joe B	1200 Medical Towers Building, Little Rock 72205	227-5050
PD	Collie, William R., IV	500 South University, Little Rock 72205	664-4117
OPH	Cook, Raymond C.	601 Scott, Little Rock 72201	375-8273
P	Cooper, Ruth Ann	5726 Stonewall Road, Little Rock 72207 (Res.)	664-9800
OBG	Cornell, Paul J.	500 South University, Little Rock 72205	664-2277
OPH	Cosgrove, K. W., Jr.	630 Medical Towers Building, Little Rock 72205	224-0400
RD	Craig, Marion S	300 Beckwood Road, Little Rock 72205 (Res.)	666-1567
GYN	Crews, J. Travis	500 South University, Little Rock 72205	664-8505
CRS	Crocker, Charles H	500 South University, Little Rock 72205	664-1272
OPH	Cross, J. B	500 South University, Little Rock 72205	666-0126
ORS	Crow, Joe W	601 North University, Little Rock 72205	666-0144
CDS	Crow, R. Lewis	600 Medical Towers Building, Little Rock 72205	227-9434
R	Dalrymple, Glenn V.	1100 Medical Towers Building, Little Rock 72205	227-5240
FP	Daugherty, Joe D.	Post Office Box 336, Jacksonville 72076	982-0576
FP	Daugherty, John L.	Post Office Box 336, Jacksonville 72076	982-0576
GS	Dean, Gilbert O.	321 Donaghey Building, Little Rock 72201	372-3661
OPH	Deer, Philip J., Jr	8500 West Markham, Little Rock 72205	224-4701
RD	Dennis, James L.	824 Ridgecrest Drive, Little Rock 72205 (Res.)	663-2447
N	Denson, William D	2003 Fendley Drive, North Little Rock 72114	753-5462
OBG	DesLauriers, S Killeen	880 Medical Towers Building, Little Rock 72205	224-5050
OTO	Dickins, John R E.	1200 Medical Towers Building, Little Rock 72205	227-5050
NS	Dickins, Robert D., Jr.	750 Medical Towers Building, Little Rock 72205	225-0880
ORS	Dickson, D Bud	500 South University, Little Rock 72205	663-4163
FP	Dillard, Daniel C.	4202 South University, Little Rock 72204	562-4838
R	Diner, Wilma C	4301 West Markham, Slot 556 Little Rock 72201	661-5740
R	Dodd, Doyne	1100 Medical Towers Building, Little Rock 72205	227-5240
RD	Dodge, Eva F.	P. O. Box 1681 (Worthen Bank), Little Rock 72203	
ORS	Dornenburg, Peter R.	#1 St. Vincent Circle, Suite 210, Little Rock 72205	661-0350
P	Douglas, Warren M.	260 Medical Towers Building, Little Rock 72205	224-2447
U	Downs, Ralph A	#1 St. Vincent Circle, Suite 320, Little Rock 72205	664-1762
	Duckett, William D	Tennessee	
PDC	Dungan, W T	900 Marshall, Little Rock 72201	372-1510
FP	Durham, James W	Post Office Box 805, Jacksonville 72076	982-4551
ORS	Dwyer, Anthony P	4301 West Markham, Little Rock 72201	661-5251
D	Dwyer, Gregory A	500 South University, Little Rock 72205	664-4161
RD	Easley, Edgar J	220 Linwood Court, Little Rock 72205 (Res.)	663-5086
ORS	Easter, Rex M	601 North University, Little Rock 72205	666-0144
P	Eckart, Emile P	4313 West Markham, Little Rock 72201	664-4500
AN	Edge, Otis H	500 South University, Little Rock 72205	664-8489
FP	Evans, Clifford L.	4801 North Hills Boulevard, #10-B, North Little Rock 72116 (Res.)	753-6947
GP	Evans, G. C.	23 Janwood, Little Rock 72207 (Res.)	227-6272
GP	Farmer, J. F	11125 Arcade Drive, Little Rock 72212	225-2594
P	Farrell, Robert E.	50 Westwind Drive, North Little Rock 72118	771-4050
FP	Farris, Guy R.	6213 Lee Avenue, Little Rock 72205	664-2115
R	Ferris, Ernest J.	4301 West Markham, Little Rock 72201	661-5740
FP	Fewell, Ronald D	Post Office Box 459, Jacksonville 72076	982-2141
GS	Fielder, Charles R	406 Pershing, North Little Rock 72114	758-1620
R	Fincher, Robert L.	1100 Medical Towers Building, Little Rock 72205	227-5240
U	Finkbeiner, Alex E.	4301 West Markham, Little Rock 72201	661-5240
PD	Fiser, Robert H., Jr.	1721 Maryland, Little Rock 72202	371-9192
GP	Fitzgibbon, Carney, Jr.	410 South Martin, Little Rock 72205 (Res.)	666-8861
PH	Fitzhugh, A. S.	4815 West Markham, Little Rock 72205	661-2242
FP	Flack, James V	424 North University, Little Rock 72205	664-4810
NS	Flanigan, Stevenson	4301 West Markham, Slot 507, Little Rock 72201	661-5270
RD	Fletcher, Elizabeth D	Quapaw Towers, 4-K, Little Rock 72202 (Res.)	372-6902
NS	Fletcher, Thomas M.	500 South University, Little Rock 72205	664-3021
IM	Flippin, Tony A	500 South University, Little Rock 72205	664-3008
PUD	Florez, James P	#1 Lile Court, Suite 201, Little Rock 72205	224-6294
GYN	Floyd, Bill G	210 Doctors Park Building, Little Rock 72205	224-6770
PTH	Fody, Edward P.	300 East Roosevelt Road, Little Rock 72206	372-8361, Ext 425
U	Fraiser, L. P	200 Doctors Park Building, Little Rock 72205	225-9755
A	France, Gene L.	11215 Hermitage Road, Little Rock 72211	224-1156
PD	Fraser, Eric A	516 Pershing, North Little Rock 72114	758-1530
OBG	Fraser, James H.	8500 West Markham, Little Rock 72205	225-1485
OBG	Fuller, C Dale	1924 Fendley Drive, North Little Rock 72114	758-3774
OPH	Fulmer, John M	5410 West Markham, Little Rock 72205	664-3142
CD	Galbraith, Jo Etta	#1 St. Vincent Circle, Suite 450, Little Rock 72205	664-5860
N	Galbraith, Robert C.	300 Medical Towers Building, Little Rock 72205	227-4750
OTO	Gardner, Guy F	330 Medical Towers Building, Little Rock 72205	227-4863
PS	Gay, Ellery C., Jr.	#2 Lile Court, Little Rock 72205	224-1044
R	Gettys, Joseph M.	1100 Medical Towers Building, Little Rock 72205	227-5240
N	Gibson, Gordon L.	300 Medical Towers Building, Little Rock 72205	227-4750
PUD	Giglia, Anthony R	500 South University, Little Rock 72205	666-5311
NS	Giles, Wilbur M.	750 Medical Towers Building, Little Rock 72205	225-0880
GYN	Gillespie, A Tharp	500 South University, Little Rock 72205	664-9555
AN	Glenn, Wayne B	500 South University, Little Rock 72205	664-4532
AN	Glidden, Michael L.	500 South University, Little Rock 72205	664-8489
END	Glover, Lawson E.	10001 Lile Drive, Little Rock 72205	227-8000
R	Glover, W. Clyde	1100 Medical Towers Building, Little Rock 72205	227-5240
PDS	Golladay, E. S.	804 Wolfe, Little Rock 72201	370-1100
P	Good, Henry H.	#1 St. Vincent Circle, Suite 340, Little Rock 72205	664-1060
A	Gordon, Vida H	9501 North Rodney Parham, Little Rock 72207	227-8545
PD	Gosser, Bob L.	516 Pershing, North Little Rock 72114	758-1530
CD	Goza, George M., Jr.	500 South University, Little Rock 72205	664-9535
GS	Graham, G Grimsley	990 Medical Towers Building, Little Rock 72205	227-9080
RD	Gray, Edwin F.	11901 Fairway Drive, Little Rock 72212 (Res.)	224-0220
GE	Greenway, C. Don	409 North University, Little Rock 72205	664-6980
RD	Greutter, John E., Jr.	2112 North Beechwood, Little Rock 72207 (Res.)	663-1547
ORS	Grimes, H. Austin	Post Office Box 5270, Little Rock 72215	224-6900
RD	Growdon, James H.	17 Wingate, Little Rock 72205 (Res.)	225-2484
GYN	Hagler, James L	500 South University, Little Rock 72205	664-5330
IM	Hall, A. D.	500 South University, Little Rock 72205	664-0027
U	Hall, A. David	500 South University, Little Rock 72205	664-4364
CD	Hall, Ronald R.	360 Doctors Park Building, Little Rock 72205	224-6525
PUD	Hampton, John R.	500 South University, Little Rock 72205	661-9393
OPH	Hankins, Edwin, III	500 South University, Little Rock 72205	666-0311
OPH	Hardberger, R E.	#1 St. Vincent Circle, Suite 120, Little Rock 72205	661-0450
GE	Hardin, Ronald D.	960 Medical Towers Building, Little Rock 72205	224-9100
AN	Harger, C. Harold	10825 Financial Centre Parkway, Little Rock 72211	227-7590
IM	Harper, Ernest H.	400 Pershing, North Little Rock 72114	227-8000
FP	Harper, Gary E.	123 Pearl, Little Rock 72205	375-3000
FP	Harrell, Robert E., Jr.	6917 Geyer Springs Road, Little Rock 72209	568-4949

Type of Practice	Member's Name	Address	Telephone Number
P	Harrendorf, Cagle	500 South University, Little Rock 72205	663-6346
R	Harris, Donald R.	Post Office Box 7509, Little Rock 72207	664-8573
IM	Harris, Michael N.	400 Pershing, North Little Rock 72114	227-8000
P	Harris, T. Stuart	12115 Hinson Road, Little Rock 72212	227-0680
NM	Harris, William T.	500 South University, Little Rock 72205	664-3914
P	Harrison, A. Vale	930 Medical Towers Building, Little Rock 72205	225-7433
FP	Harrison, Roy E.	8824 Chicot Road, Little Rock 72209	562-8600
OBG	Harrison, William E.	500 South University, Little Rock 72205	664-9232
P	Hawley, H. B.	413 Medical Arts Building, Little Rock 72202	372-5802
GS	Hayden, William F.	500 South University, Little Rock 72205	664-2434
PS	Hayes, J. Harry, Jr.	#1 St. Vincent Circle, Suite 310, Little Rock 72205	666-2811
FP	Hayes, Richard L.	#2 Crestview Plaza, Jacksonville 72076	982-4551
R	Haynes, W. D.	500 South University, Little Rock 72205	664-3914
U	Headstream, James W.	500 South University, Little Rock 72205	664-4364
P	Hearnsberger, Henry G., Jr.	4313 West Markham, Little Rock 72201	664-4500
FP	Hedges, Harold H.	424 North University, Little Rock 72205	664-4810
A	Hefley, Bill F.	Post Office Box 5675, Little Rock 72215	227-5210
FP	Hendren, Mike C.	280 Doctors Park Building, Little Rock 72205	227-6226
P	Henker, Fred O., III	4301 West Markham, Little Rock 72201	661-5266
OBG	Henry, C. Reid	500 South University, Little Rock 72205	664-4191
GYN	Henry, Charles R., Sr.	500 South University, Little Rock 72205	664-4191
N	Henry, G. Morrison	300 Medical Towers Building, Little Rock 72205	227-4750
OPH	Henry, J. Forrest, Jr.	516 Scott, Little Rock 72201	374-6338
OPH	Henry, Richard Y.	312 Pershing, North Little Rock 72114	758-7627
PD	Henry, Robert L., Jr.	500 South University, Little Rock 72205	664-4044
IM	Herron, Jerry M.	#1 Lile Court, Suite 201, Little Rock 72205	224-6294
AN	Hickey, Joseph P.	1150 Medical Towers Building, Little Rock 72205	664-2496
CD	Hicks, David C.	Post Office Box 5600, Little Rock 72215	227-7596
U	Higginbothom, William E., Jr.	500 South University, Little Rock 72205	664-0651
AN	Hill, Howell V.	10825 Financial Centre Parkway, Little Rock 72211	227-7590
CDS	Hoffmann, Tom	200 Medical Towers Building, Little Rock 72205	224-5666
R	Holder, John C.	4301 West Markham, Little Rock 72201	661-5740
RD	Hollenberg, Henry G.	#7 Longfellow Circle, Little Rock 72207 (Res.)	663-7767
RD	Hollis, N. T.	8701 Riley Drive, Little Rock 72205 (Res.)	227-8677
FP	Holmes, Harlan C.	1160 Medical Towers Building, Little Rock 72205	225-6123
GS	Holt, L. Gordon	5326 West Markham, Little Rock 72205	666-9442
RHU	Holt, Stephen D.	10001 Lile Drive, Little Rock 72205	227-8000
R	Holton, Jerry C.	500 South University, Little Rock 72205	664-3914
PTH	Hough, Aubrey J., Jr.	4301 West Markham, Little Rock 72201	661-5170
P	Howard, John G., Jr.	9601 Lile Drive, Little Rock 72205	227-6370
N	Howell, Coburn S., Jr.	300 Medical Towers Building, Little Rock 72205	227-4750
OBG	Howell, Marsha T.	310 Doctors Park Building, Little Rock 72205	224-4738
NEP	Hughes, Ron	500 South University, Little Rock 72205	664-9881
ORS	Hundley, John M.	412 Cross, Little Rock 72201	375-5338
ORS	Hutson, Harold G.	110 Doctors Park Building, Little Rock 72205	227-4150
IM	Jackson, J. Presley	10001 Lile Drive, Little Rock 72205	227-8000
FP	Jackson, Morris A.	1304 Wright Avenue, Little Rock 72206	374-7940
D	Jansen, G. Thomas	500 South University, Little Rock 72205	664-4161
PTH	Jimenez, Jorge F.	804 Wolfe, Little Rock 72201	370-1100
PTH	Johnson, B. Richard	9600 West 12th, Little Rock 72205	227-2888
CD	Johnson, Ben D.	500 South University, Little Rock 72205	664-9535
OBG	Johnson, D. Richard	500 South University, Little Rock 72205	664-8003
IM	Johnson, Henry D.	500 South University, Little Rock 72205	664-4171
ORS	Johnson, Philip H.	Post Office Box 5270, Little Rock 72215	224-6900
OBG	Johnson, Spencer L.	500 South University, Little Rock 72205	661-1711
A	Johnston, Thomas G.	P. O. Drawer A, Hillcrest Station, Little Rock 72205	664-3904
AN	Jones, Garry L.	500 South University, Little Rock 72205	664-8489
GS	Jones, John C.	500 South University, Little Rock 72205	664-4747
ORS	Jones, Kenneth G.	Post Office Box 5270, Little Rock 72215	224-6900
GS	Jones, Robert D.	500 South University, Little Rock 72205	664-4747
D	Jones, William N.	500 South University, Little Rock 72205	664-0418
NS	Jordan, F. Richard	804 Wolfe, Little Rock 72201	370-1100
NS	Jouett, W. Ray	750 Medical Towers Building, Little Rock 72205	225-0880
R	Joyce, John W.	1100 Medical Towers Building, Little Rock 72205	227-5240
RD	Junkin, Ruth H.	1012 Holden, Newport 72112 (Res.)	523-3238
AN	Kaemmerling, R. E.	500 South University, Little Rock 72205	664-8489
FP	Kagy, John K.	10121 North Rodney Parham, Little Rock 72207	224-2525
IM	Kahn, Alfred, Jr.	1300 West 6th, Little Rock 72201	374-5588
PTH	Kalderon, Albert E.	4301 West Markham, Little Rock 72201	661-5172
CD	Kane, James J.	#1 St. Vincent Circle, Suite 450, Little Rock 72205	664-5860
D	Keeran, Michael G.	500 South University, Little Rock 72205	664-4161
IM	Kellar, Stanley L.	Post Office Box 277, Jacksonville 72076	985-1536
OBG	Keller, Al W.	1924 Fendley Drive, North Little Rock 72114	758-3774
FP	Kennedy, Charles H.	3115 JFK Boulevard, North Little Rock 72116	753-9464
PD	Kennedy, H. Frazier	500 South University, Little Rock 72205	664-4117
PDA	Kittler, Fred J.	Post Office Box 5675, Little Rock 72215	227-5210
CD	Kizziar, J. C.	10001 Lile Drive, Little Rock 72205	227-8000
P	Koehler, Thomas R.	4313 West Markham, Little Rock 72201	664-4500
IM	Kohler, Peter O.	4301 West Markham, Slot 640, Little Rock 72201	661-5160
RD	Kolb, Agnes, C.	30 Lenon Drive, Little Rock 72207 (Res.)	663-7930
P	Kolb, W. Payton	230 Medical Towers Building, Little Rock 72205	225-0887
RHU	Kovaleski, Thomas M.	10001 Lile Drive, Little Rock 72205	227-8000
RD	Kozberg, Oscar	4 Windsor Court, Little Rock 72212 (Res.)	225-7709
GYN	Kreth, Kay M.	417 North University, Little Rock 72205	663-9441
TS	Krishnan, Bhaktan	#1 St. Vincent Circle, Suite 170, Little Rock 72205	663-2163
P	Krulin, Gregory S.	#1 St. Vincent Circle, Suite 340, Little Rock 72205	664-1060
CD	Kumpuris, Andrew G.	415 North University, Little Rock 72205	664-6841
GE	Kumpuris, D. Dean	501 North University, Little Rock 72205	666-0249
GS	Kumpuris, Frank G.	415 North University, Little Rock 72205	664-1521
OBG	Kwee, James J.	#1 Lile Court, Little Rock 72205	224-5500
OTO	Kyser, James F.	200 Medical Towers Building, Little Rock 72205	227-8501
OPH	Landers, James H.	500 South University, Little Rock 72205	664-1104
R	Lane, John W.	9600 West 12th, Rad. Dept., Little Rock 72201	227-2180
GS	Lang, Nicholas P.	4301 West Markham, Little Rock 72201	661-6186
R	Langston, Harold D.	Post Office Box 56202, Little Rock 72215	664-8573
FP	Laurenzana, Donald A.	3423 Pike, North Little Rock 72118	753-3661
RD	Lawson, Mason G.	200 Ridgeway, Little Rock 72205 (Res.)	663-4834
A	Lee, J. Fred	P. O. Drawer A, Hillcrest Station, Little Rock 72205	664-3904
PS	Lehmberg, Robert W.	919 University Tower Building, Little Rock 72204	664-8672
EM	Leibovich, Marvin	9600 West 12th, Emer. Dept., Little Rock 72201	227-1087
RHU	Leonard, Donald G.	#1 St. Vincent Circle, Suite 150, Little Rock 72205	664-2466
OBG	Leou, Frank J.	1070 Medical Towers Building, Little Rock 72205	224-1080
PM	Lepore, Diane G.	515 Medical Arts Building, Little Rock 72201	370-7257
RD	Lester, Joe K.	8 River Ridge Road, Little Rock 72207 (Res.)	225-2974
PD	Levin, Frederick R.	500 South University, Little Rock 72205	664-4044
EM	Lewellen, John C.	Capitol and University, Little Rock 72205	661-4267
CD	Lewis, W. Sexton	700 Medical Towers Building, Little Rock 72205	227-4434

Type of Practice	Member's Name	Address	Telephone Number
R	Lile, Henry A	1100 Medical Towers Building, Little Rock 72205	227-5240
TS	Lincoln, Ben M.	5326 West Markham, Little Rock 72205	664-6705
ORS	Lipke, Jay M.	601 North University, Little Rock 72205	666-0144
CDS	Loebl, Edward C.	250 Medical Towers Building, Little Rock 72205	227-4787
U	Logan, Charles W.	500 South University, Little Rock 72205	664-4364
#	Logue, Richard M.	Little Rock	
IM	Love, Tommy L., Jr.	#1 St. Vincent Circle, Suite 350, Little Rock 72205	664-5932
PD	Lowe, Betty Ann	804 Wolfe, Little Rock 72201	370-1100, Ext. 101
N	Lucy, Dennis D., Jr.	4301 West Markham, Little Rock 72201	661-5134
GS	Ludwig, Frank R.	406 Pershing, North Little Rock 72114	758-1620
GS	Lyons, Virgle E., Jr.	500 South University, Little Rock 72205	664-2434
PTH	Malak, F. A.	Post Office Box 5274, Little Rock 72215	227-5936
FP	Mallory, George L.	4511 Lynch Drive, North Little Rock 72117	945-9271
**AN	Mallory, John A.	4301 West Markham, Little Rock 72201	661-6114
FP	Mann, R. Jerry	6924 Geyer Springs Road, Little Rock 72209	562-1463
PTH	Markland, Gary S.	9601 Interstate 630, Exit 7, Little Rock 72205	227-2888
PUD	Mason, William L.	500 South University, Little Rock 72205	661-9393
RD	Massey, C. G.	#9 Racquet Court, Little Rock 72207 (Res.)	225-6444
A	Matthews, Joe W.	Post Office Box 5675, Little Rock 72215	227-5210
P	Matthews, Robert R.	4301 West Markham, Slot 568, Little Rock 72201	661-5903
CD	Meacham, Donald F.	650 Shackleford Road, Little Rock 72211	224-9001
AN	Means, Paul N.	10825 Financial Centre Parkway, Little Rock 72211	225-7590
IM	Metrailer, James A.	1100 North University, Little Rock 72207	664-1540
N	Miles, David A.	500 South University, Little Rock 72205	664-3018
ORS	Millard, I. Leighton	Post Office Box 5270, Little Rock 72215	224-6900
NEP	Miller, C. Lindsey	350 Medical Towers Building, Little Rock 72205	224-2141
FP	Miller, Forrest B.	4202 South University, Little Rock 72204	562-4838
IM	Miller, Raymond P., Sr.	5918 Lee, Little Rock 72205	664-2500
OBG	Miller, Timothy T.	4301 West Markham, Little Rock 72201	661-5921
OTO	Milner, E. L.	500 South University, Little Rock 72205	664-4318
ADM	Mitchell, George K.	Post Office Box 2181, Little Rock 72203	378-2133
GS	Mollitt, Daniel L.	804 Wolfe, Little Rock 72201	370-1100
N	Money, Wandal D.	2003 Fendley Drive, North Little Rock 72114	753-5462
D	Moore, Burton A.	500 South University, Little Rock 72205	664-4161
U	Moore, J. Malcolm, Jr.	500 South University, Little Rock 72205	664-4364
FP	Moore, Rex N.	Post Office Box 459, Jacksonville 72076	982-2141
IM	Moore, Robert B.	5918 Lee, Little Rock 72205	664-2500
OBG	Morgan, Frank E.	410 Pershing, North Little Rock 72114	758-1022
TS	Morris, W. Dale	8500 West Markham, Little Rock 72205	224-1950
GER	Morris, Woodbridge E.	310 Ridgeway, Little Rock 72205 (Res.)	663-6551
FP	Morrison, Doyle H.	3807 McCain Park Drive, North Little Rock 72116	758-8981
R	Morrison, James R.	500 South University, Little Rock 72205	664-3914
ORS	Morrissy, Raymond T.	804 Wolfe, Little Rock 72201	370-1100
IM	Morse, James C.	500 South University, Little Rock 72205	661-9740
GE	Morton, William J.	10001 Lile Drive, Little Rock 72205	227-8000
ORS	Mulhollan, James S.	#1 St. Vincent Circle, Suite 410, Little Rock 72205	664-6334
GP	Murphy, James E.	1800 Maple, North Little Rock 72114	758-1640
P	Murphy, Randolph	708 West Second, Little Rock 72201	371-2214
R	McAdoo, Hosea W., Jr.	1100 Medical Towers Building, Little Rock 72205	227-5240
GYN	McCaskill, Melvin R.	500 South University, Little Rock 72205	664-4131
GS	McCracken, John D.	970 Medical Towers Building, Little Rock 72205	227-8180
FP	McCrary, George A.	Post Office Box 805, Jacksonville 72076	982-4551
FP	McGowan, R. J., Jr.	424 North University, Little Rock 72205	664-4810
OTO	McGrew, Robert N.	1200 Medical Towers Building, Little Rock 72205	227-5050
OBG	McKelvey, K. David	500 South University, Little Rock 72205	664-4131
ORS	McKenzie, Charles N.	802 North University, Little Rock 72205	666-0251
OBG	McKnight, C. Allen	800 Medical Towers Building, Little Rock 72205	227-5885
RD	McMillin, Lamar	337 Crystal Court, Little Rock 72205 (Res.)	663-3783
OPH	McNair, James R.	1000 Medical Towers Building, Little Rock 72205	227-6980
GP	Napper, George S.	513 Main, North Little Rock 72114	375-2433
R	Nelson, Alvah J., III	500 South University, Little Rock 72205	664-3914
ORS	Nelson, Carl L.	4301 West Markham, Little Rock 72201	661-5505
PM	Nelson, Robert D.	1120 Marshall, Little Rock 72202	370-7257
R	Newbern, David H.	500 South University, Little Rock 72205	664-3914
RD	Nisbett, James M.	517 East Seventh, Jonesboro 72401 (Res.)	375-2252
ORS	Nix, Richard A.	9500 Lile Drive, Little Rock 72205	224-6900
FP	Nolen, James E.	Post Office Box 5236, Jacksonville 72076	985-1555
R	Norton, George A.	500 South University, Little Rock 72205	664-3914
R	Norton, Joseph A.	8570 Cantrell, Little Rock 72207 (Res.)	661-3671
PH	Oates, Gordon P.	1700 West 13th, Little Rock 72202	376-4511
R	Oddson, Terrence A.	500 South University, Little Rock 72205	664-3914
GP	Ogden, Mahlon D.	4601 Woodlawn, Little Rock 72205	664-0769
P	Oglesby, Walter R.	2500 McCain Boulevard, North Little Rock 72116	758-9992
ADM	O'Neal, Walter H.	9601 Interstate 630, Little Rock 72201	227-2672
GS	Osam, Patrick N.	320 Doctors Park Building, Little Rock 72205	227-7200
GS	Ozment, Kerry L.	500 South University, Little Rock 72205	663-4020
ADM	Padberg, Frank T.	175 East Delaware Place, #5402, Chicago, Illinois 60611 (Res.)	312-664-4050
ONC	Padilla, Fernando	#1 St. Vincent Circle, Suite 160, Little Rock 72205	664-6601
AN	Panuska, Jerry	10825 Financial Centre Parkway, Little Rock 72211	227-7590
OTO	Pappas, James J.	1200 Medical Towers Building, Little Rock 72205	227-5050
OPH	Parker, J. Mayne	500 South University, Little Rock 72205	666-9632
GS	Parnell, Clifton L., III	8500 West Markham, Little Rock 72205	224-1950
PD	Paulus, Thomas E.	500 South University, Little Rock 72205	664-4044
ORS	Peeples, R. Earl	110 Doctors Park Building, Little Rock 72205	227-4150
CHP	Peters, John E.	4301 West Markham, Little Rock 72201	661-5800
END	Peters, Phillip J.	10001 Lile Drive, Little Rock 72205	227-8000
OPH	Petursson, Gissur J.	4301 West Markham, Little Rock 72201	661-5151
RD	Phillips, Bert L.	4525 Rosemont Drive, North Little Rock 72116 (Res.)	753-6057
OBG	Phillips, Charles E.	800 Medical Towers Building, Little Rock 72205	227-5885
PUD	Phillips, James R.	890 Medical Towers Building, Little Rock 72205	224-0110
GS	Phipps, W. E., Jr.	Post Office Box 13, North Little Rock 72115	374-4821
GS	Pike, John D.	500 South University, Little Rock 72205	664-4321
FP	Pledger, Norman R.	3525 JFK Boulevard, North Little Rock 72116	758-2644
AN	Pollard, Arlee E.	500 South University, Little Rock 72205	661-3578
RD	Pool, Chalmers S.	3925 North Lookout, Little Rock 72205 (Res.)	663-9352
PS	Pope, Norton A.	850 Medical Towers Building, Little Rock 72205	227-6464
OTO	Potts, Jerry L.	500 South University, Little Rock 72205	664-9082
GE	Power, Robert C.	409 North University, Little Rock 72205	664-6980
NM	Prather, Jerry L.	500 South University, Little Rock 72205	664-3914
CD	Price, Ben O.	500 South University, Little Rock 72205	664-9535
RD	Pringos, Andrew A.	Post Office Box 2900, Little Rock 72203 (Res.)	663-6230
RD	Proctor, Clark B.	63 Sherrill Heights, Little Rock 72202 (Res.)	663-5269
FP	Purdy, Harold D.	6924 Geyer Springs Road, Little Rock 72209	562-1463
IM	Pyle, Hoyte R., Jr.	5918 Lee, Little Rock 72205	664-2500
N	Ragsdill, Mary L.	2003 Fendley Drive, North Little Rock 72114	753-5462
CDS	Ransom, John M.	780 Medical Towers Building, Little Rock 72205	224-1508
D	Raque, Carl J.	500 South University, Little Rock 72205	666-5451

Type of Practice	Member's Name	Address	Telephone Number
IM	Rasch, James R.	10001 Lile Drive, Little Rock 72205	227-8000
GS	Read, Raymond C.	300 East Roosevelt Road, Little Rock 72206	372-8361
PUD	Rector, Nancy F.	890 Medical Towers Building, Little Rock 72205	224-0110
NS	Reding, David L.	750 Medical Towers Building, Little Rock 72205	225-0880
U	Redman, John F.	4301 West Markham, Slot 540, Little Rock 72201	661-5240
OBG	Reed, Ewing C., Jr	300 Doctors Park Building, Little Rock 72205	227-6377
IM	Reeder, Kathryn I	Route 2, Box 154-B, Conway 72032 (Res)	327-5440
P	Reese, William G.	4301 West Markham, Slot 506, Little Rock 72201	661-5266
R	Regnier, George G.	500 South University, Little Rock 72205	664-3914
#	Rhinehart, William J	Little Rock	
U	Rice, Peyton E.	2000 Fendley Drive, North Little Rock 72114	753-4593
CD	Richards, Mary K.	#1 St Vincent Circle, Suite 140, Little Rock 72205	666-5000
GS	Richardson, Robert E.	500 South University, Little Rock 72205	664-4321
FP	Riddle, John F., Jr	8824 Chicot Road, Little Rock 72209	562-8600
R	Ridout, Robert G	4301 West Markham, Little Rock 72201	661-5000
FP	Riegler, N W , Jr	1024 Scott, Little Rock 72202	375-3326
CDS	Riggs, Orval E.	#1 St Vincent Circle, Suite 160, Little Rock 72205	666-2001
FP	Riley, William H	4202 South University, Little Rock 72204	562-4838
CHP	Ringdahl, Irving C.	4301 West Markham, Little Rock 72201	661-5810
OPH	Roberson, Michael C.	623 Woodlane, Little Rock 72201	374-6491
FP	Rodgers, Charles H.	4202 South University, Little Rock 72204	562-4838
GYN	Rodgers, C Dudley	500 South University, Little Rock 72205	664-4131
RD	Rodgers, Clyde D	5223 Hawthorne Road, Little Rock 72207 (Res)	663-7502
GYN	Roman, Juan J.	#1 St Vincent Circle, Suite 360, Little Rock 72205	661-0596
ORS	Rooney, Thomas P	501 West 25th, North Little Rock 72114	758-2046
RD	Rosenbaum, Carl A.	107 Cambridge Place, Little Rock 72207 (Res)	225-8071
GYN	Ross, Robert W	123 Normandy Road, Little Rock 72207 (Res.)	663-2052
IM	Ross, S William	#1 St. Vincent Circle, Suite 110, Little Rock 72205	664-6600
RD	Rothert, Frances C.	Benedictine Manor, Hot Springs 71913 (Res.)	623-1571
OTO	Rounsaville, H L.	500 South University, Little Rock 72205	664-9082
OPH	Roy, F Hampton	1000 Medical Towers Building, Little Rock 72205	227-6980
OTO	Ruggles, Dwayne L.	520 West 26th, North Little Rock 72114	758-6560
ORS	Runyan, William A	110 Doctors Park Building, Little Rock 72205	227-4150
ORS	Saer, Edward H , III	#1 St Vincent Circle, Suite 210, Little Rock 72205	661-0350
PH	Saltzman, Ben N	4815 West Markham, Little Rock 72205	661-2111
TS	Satterfield, John V	500 South University, Little Rock 72205	664-6050
ORS	Schock, Charles C	Post Office Box 5270, Little Rock 72215	224-6900
FP	Schratz, Bruce E.	1801 Maple, North Little Rock 72114	758-1002
OPH	Schroeder, George T.	260 Doctors Park Building, Little Rock 72205	224-4484
IM	Schultz, John C.	10001 Lile Drive, Little Rock 72205	227-8000
GS	Schwander, Howard	320 Doctors Park Building, Little Rock 72205	227-7200
OPH	Schwarz, W J.	405 North University, Little Rock 72205	664-5354
OPH	Scruggs, Jan W	312 Pershing, North Little Rock 72114	758-7627
R	Seibert, Joanna J.	804 Wolfe, Little Rock 72201	370-1100
ORS	Selakovich, Walter G	500 South University, Little Rock 72205	666-2824
OBG	Selby, Micheal L.	500 South University, Little Rock 72205	664-8003
P	Shannon, Robert F.	4313 West Markham, Little Rock 72205	664-4500
OPH	Shock, John P	4301 West Markham, Slot 523, Little Rock 72201	661-5150
ORS	Shuffield, H Elvin	2 Valley Club Circle, Little Rock 72212 (Res)	227-0418
PD	Shultz, Sam L.	4815 West Markham, Little Rock 72205	661-2757
IM	Silvoso, Gerald R	10001 Lile Drive, Little Rock 72205	227-8000
OBG	Simmons, Orman W	#1 Lile Court, Little Rock 72205	224-5500
IM	Simpson, N Henry	941 Donaghey Building, Little Rock 72201	375-2801
P	Sims, James M.	2500 McCain, North Little Rock 72116	758-9992
PD	Sims, Neil H.	4301 West Markham, Little Rock 72201	661-5320
PTH	Singleton, L. Gene	1120 Medical Towers Building, Little Rock 72205	227-2888
GS	Sipes, Frank M.	1100 North University, Little Rock 72207	664-4596
OBG	Skokos, C. Kemp	500 South University, Little Rock 72205	664-8490
ORS	Slater, John G	1100 North University, Little Rock 72207	664-7710
PTH	Slaven, John E.	9600 West 12th, Little Rock 72201	227-2888
R	Slayden, John E	1100 Medical Towers Building, Little Rock 72205	227-5240
AN	Sloan, Fay M	10825 Financial Centre Parkway, Little Rock 72211	227-7590
GYN	Sloan, James M.	500 South University, Little Rock 72205	664-2277
GE	Smart, Douglas F.	409 North University, Little Rock 72205	664-6980
P	Smith, Aubrey C.	#1 St Vincent Circle, Suite 260, Little Rock 72205	664-0001
ORS	Smith, Bruce L., Jr	#1 St Vincent Circle, Suite 210, Little Rock 72205	661-0350
CD	Smith, David E.	360 Doctors Park Building, Little Rock 72205	224-6525
OBG	Smith, Douglas B	#1 Lile Court, Little Rock 72205	224-5500
OPH	Smith, James L.	623 Woodlane, Little Rock 72201	374-6491
OPH	Smith, Joe E.	7107 West 12th, Little Rock 72204	666-8627
FP	Smith, John McCollough	4000 Woodlawn, Little Rock 72205	666-6570
GYN	Smith, Mose, III	5326 West Markham, Little Rock 72205	664-1527
R	Smith, Phillip L.	4301 West Markham, Little Rock 72201	661-5740
A	Smith, Purcell, Jr.	Post Office Box 5675, Little Rock 72215	227-5210
GE	Smith, Thomas J.	409 North University, Little Rock 72205	664-6980
PD	Smith, Thomas W.	500 South University, Little Rock 72205	664-4117
OTO	Smith, Tom	330 Medical Towers Building, Little Rock 72205	227-4863
RD	Snodgrass, W A., Jr.	351 Conti, #1104, Mobile, Alabama 36602 (Res.)	205-433-9471
R	Snyder, Linda M	1100 Medical Towers Building, Little Rock 72205	227-5240
FP	Somers, A Jack	330 Doctors Park Building, Little Rock 72205	227-6363
ORS	Sorrells, R. Barry	Post Office Box 5270, Little Rock 72215	224-6900
RD	Spitzberg, Irving J.	307 North Cedar, Little Rock 72205 (Res.)	663-6877
EM	Spurgeon, Stanley	4301 West Markham, Slot 584, Little Rock 72201	661-5515
PUD	Squire, Arthur E.	10001 Lile Drive, Little Rock 72205	227-8000
GS	Stainton, Robert M.	6715 Beacon, Little Rock 72207 (Res.)	663-6355
U	Stallings, J. Walt	500 South University, Little Rock 72205	664-0651
IM	Stanley, Joe P	Pike Plaza Center, North Little Rock 72114	758-9823
R	Stannard, M. W	804 Wolfe, Little Rock 72201	370-1100
ORS	Steele, William L.	1100 North University, Little Rock 72207	664-7710
#	Steinkamp, Ruth C.	Little Rock	
IM	Sternberg, Jack J	1000 North University, Little Rock 72207	661-0060
IM	Stockley, Susan M.	1100 North University, Little Rock 72207	664-1540
END	Stonesifer, Larry D.	8500 West Markham, Little Rock 72205	225-9654
FP	Storeygard, Alan R.	Post Office Box 459, Jacksonville 72076	982-2141
FP	Stotts, John R.	Post Office Box 7219, Little Rock 72217	663-9415
CD	Stout, Kimber M.	2000 Fendley Drive, North Little Rock 72114	758-5133
FP	Strauss, Alvin W., Jr.	1026 Donaghey Building, Little Rock 72201	372-1828
IM	Strauss, Mark A.	1026 Donaghey Building, Little Rock 72201	372-1828
PTH	Strauss, Robert A.	4301 West Markham, Slot 502, Little Rock 72201	661-5950
PD	Stroope, George F.	516 Pershing, North Little Rock 72114	758-1530
OBG	Struble, Harlan	270 Medical Towers Building, Little Rock 72205	224-6300
PS	Stuckey, James G.	500 South University, Little Rock 72205	664-4383
OBG	Studdard, James D.	#1 Lile Court, Little Rock 72205	224-5500
U	Sulieman, J. Samir	518 West 26th, North Little Rock 72114	758-6111
PTH	Sullivan, Charles D	1120 Medical Towers Building, Little Rock 72205	227-2888
N	Sullivan, Jan R.	300 Medical Towers Building, Little Rock 72205	227-4750
P	Sundermann, Richard H.	Veterans Adm. Hospital, North Little Rock 72114	372-8361

Type of Practice	Member's Name	Address	Telephone Number
RD	Swindoll, Bryant S	3415 North Hills Boulevard, North Little Rock 72116 (Res.)	753-3029
OBG	Tanner, James A	#1 Lile Court, Little Rock 72205	224-5500
IM	Taylor, Eugene H	10001 Lile Drive, Little Rock 72205	227-8000
CRS	Tedford, John G	500 South University, Little Rock 72205	664-8466
PD	Teeter, John A	501 North University, Little Rock 72205	661-1917
GE	Texter, E. Clinton, Jr.	4301 West Markham, Slot 567, Little Rock 72201	661-5177
OPH	Thomas, A. Henry	500 South University, Little Rock 72205	664-8445
	Thomas, James L.	Mobile, Alabama	
ORS	Thomas, Jerry L.	#1 St. Vincent Circle, Suite 210, Little Rock 72205	661-0350
GS	Thomas, Peter O.	1310 Cantrell Road, Little Rock 72201	374-5703
CD	Thompson, A. James	#1 St. Vincent Circle, Suite 450, Little Rock 72205	664-5860
OTO	Thompson, Albert R.	500 South University, Little Rock 72205	664-4381
GS	Thompson, Bernard W.	300 East Roosevelt Road, Little Rock 72206	372-8361
AN	Thompson, Dola S.	4301 West Markham, Little Rock 72201	661-6115
ORS	Thompson, S. Berry	1100 North University, Little Rock 72207	664-7710
ORS	Thompson, Samuel B.	1100 North University, Little Rock 72207	664-7710
ADM	Thorn, G. Max	St. Vincent Infirmary, Little Rock 72201	661-3154
OBG	Thrower, Rufus, Jr.	1306 Wright Avenue, Little Rock 72206	374-3926
FP	Tilley, Steve B.	Post Office Box 7219, Little Rock 72217	663-9415
R	Tirman, Robert M.	4301 West Markham, Little Rock 72201	661-5740
IM	Tolbert, Louis E., Jr.	500 South University, Little Rock 72205	666-0136
ADM	Towbin, Eugene J.	300 East Roosevelt Road, Little Rock 72206	372-8361, Ext. 291
FP	Tracy, Phillip A.	Post Office Box 459, Jacksonville 72076	982-2141
ONC	Tranum, Billy L.	500 South University, Little Rock 72205	664-3008
GP	Trussell, Thomas W.	5300 West Markham, Little Rock 72205	663-6251
AN	Tseng, Jyi-Ming	10825 Financial Centre Parkway, Little Rock 72211	227-7590
GS	Tucker, W. Everett	990 Medical Towers Building, Little Rock 72205	227-9080
AN	Valentine, Robert G.	2800 Percy Machin, North Little Rock 72114	758-4806
AN	Vaughter, W. Roger	#3 Ken Circle, Little Rock 72207 (Res.)	664-3789
FP	Venable, Robert S.	6917 Geyer Springs Road, Little Rock 72209	568-4949
PS	Vogel, Robert G.	919 University Tower Building, Little Rock 72204	664-8672
GP	Wade, W. I.	424 North University, Little Rock 72205	664-4810
IM	Wagoner, Jack	5918 Lee, Little Rock 72205	664-2500
RD	Wallis, Charles	5909 Country Club, Little Rock 72207 (Res.)	663-2132
GS	Walt, James R.	500 South University, Little Rock 72205	664-4146
IM	Ward, Harry P.	4301 West Markham, Little Rock 72201	661-5680
AN	Ward, Joseph P.	10825 Financial Centre Parkway, Little Rock 72211	227-7590
PD	Warford, Lloyd R.	500 South University, Little Rock 72205	664-4044
RD	Wartord, Walton R.	3737 Lakeshore Drive, North Little Rock 72116 (Res.)	753-4193
OPH	Watkins, John G., Jr.	230 Doctors Park Building, Little Rock 72205	227-6797
OPH	Watkins, John G., III	230 Doctors Park Building, Little Rock 72205	227-6797
IM	Watkins, Larry S.	500 South University, Little Rock 72205	661-9740
RD	Watson, C. Robert	30 Edgehill, Little Rock 72207 (Res.)	663-6680
ORS	Weber, Edward R.	4301 West Markham, Little Rock 72201	661-5251
FP	Weber, James R.	Post Office Box 188, Jacksonville 72076	982-2108
ORS	Weber, Michael J.	1518 Main, North Little Rock 72114	375-0102
CDS	Weiss, John B.	780 Medical Towers Building, Little Rock 72205	224-1508
NEP	Wellons, James A.	350 Medical Towers Building, Little Rock 72205	224-2141
PS	Wende, Raymond A.	919 University Tower Building, Little Rock 72204	664-8672
GS	Wenger, Carl E.	330 Doctors Park Building, Little Rock 72205	227-6363
GS	Westbrook, Kent C.	4301 West Markham, Little Rock 72201	661-5987
P	Westerfield, Frank M.	230 Medical Towers Building, Little Rock 72205	225-0777
CDS	Westerman, G. Richard	1401 West Markham, Little Rock 72201	661-5300
PTH	Wetzel, William J.	4301 West Markham, Little Rock 72201	661-5171
FP	White, Oba B.	908 High, Little Rock 72202	374-3609
RD	Wilbur, E. Lloyd	#3 Wingate Drive, Little Rock 72205 (Res.)	225-1252
GP	Wilkes, Elbert H.	5326 West Markham, Little Rock 72205	663-4114
OPH	Wilkes, T. David I.	4301 West Markham, Slot 523, Little Rock 72201	661-5150
CDS	Williams, C. David	200 Medical Towers Building, Little Rock 72205	224-5666
CDS	Williams, G. Doyne	#1 St. Vincent Circle, Suite 330, Little Rock 72205	666-2894
NS	Williams, Ronald N.	750 Medical Towers Building, Little Rock 72205	225-0880
CD	Wilson, James W.	#1 St. Vincent Circle, Suite 440, Little Rock 72205	664-9040
FP	Wilson, Jed D.	705 North Ash, Little Rock 72205	663-5413
ORS	Wilson, John L.	601 North University, Little Rock 72205	666-0144
OPH	Wilson, R. Sloan	500 South University, Little Rock 72205	664-1104
IM	Winn, Charles R., Jr.	240 Doctors Park Building, Little Rock 72205	227-6659
OBG	Wong, Ting C.	4301 West Markham, Little Rock 72201	661-5921
GYN	Wood, Gary P.	500 South University, Little Rock 72205	664-6127
FP	Wortham, T. H.	Post Office Box 459, Jacksonville 72076	982-2141
CDS	Wright, Ruel N.	#1 St. Vincent Circle, Little Rock 72205	666-2894
PTH	Young, Douglas E.	9600 West 12th, Little Rock 72205	771-3264
U	Young, Jerry M.	410 West 26th, North Little Rock 72114	758-1310
OBG	Young, Robert P.	500 South University, Little Rock 72205	664-8003
RD	Zell, Lawrence M.	Star Route, Box 88-B, Tucker 72168 (Res.)	842-2216

RANDOLPH COUNTY

FP	Baltz, Albert L.	Route 5, Doctors Medical Building, Pocahontas 72455	892-4467
FP	Baltz, M. A.	110 West Broadway, Pocahontas 72455	892-3111
FP	Barre, Hal S.	Route 5, Doctors Medical Building, Pocahontas 72455	892-4497
GP	DeClerk, Thomas B.	Route 5, Doctors Medical Building, Pocahontas 72455	892-3344
GS	Hadad, Anibal R.	Post Office Box 725, Pocahontas 72455	892-4406
FP	Holt, Danny B.	Route 5, Doctors Medical Building, Pocahontas 72455	892-4467
FP	Jansen, Andrew J., III	Route 5, Doctors Medical Building, Pocahontas 72455	892-4467
FP	Lombardo, Richard J.	Route 4, Highway 90, Pocahontas 72455	892-4464
FP	Scott, William W.	Post Office Box 466, Pocahontas 72455	892-8086
GP	Smith, Norman K.	107 Van Bibber, Pocahontas 72455	892-3389

SALINE COUNTY

RD	Ashby, John W.	312 Dogwood, Benton 72015 (Res.)	778-2470
R	Ashby, Robert M.	815 North East, Benton 72015	778-6555
GS	Baber, Ouin M.	105 McNeil, Benton 72015	778-7435
OM	Bethel, James C.	300 East Roosevelt Road, Little Rock 72206	372-8361, Ext. 300
OBG	Caldwell, David L.	910 North East, Benton 72015	778-0426
ORS	Cash, Ralph D.	105 McNeil, Benton 72015	778-1388
GP	Coker, S. Dale	Benton Services Center, Building #6, Benton 72015	371-1906
FP	Cornwell, Sam L.	Route 3, Box 225, Benton 72015	371-1906
OBG	Council, R. A., Jr.	910 North East, Benton 72015	778-0426
ORS	Duncan, J. Shelby	105 McNeil, Benton 72015	778-1388
OM	Frandolig, John E.	Post Office Box 97, Bauxite 72011	557-5421, Ext. 479
OPH	Gardner, Dan R.	Post Office Box 340, Benton 72015	778-8843
GP	Hogue, F. Paul	Post Office Box 307, Benton 72015	778-4511
FP	Hood, C. Ted	205 Carpenter, Benton 72015	778-8264
GP	Izard, Ralph S.	Post Office Box A-A, Bryant 72022	847-0289
#	Jones, Curtis W., Sr.	Benton	
FP	Kirk, Marvin N., Jr.	205 Carpenter, Benton 72015	778-8264
GP	Martindale, J. L.	302 West South, Benton 72015	778-4511

Type of Practice	Member's Name	Address	Telephone Number
P	Mizell, Walter S.	Benton Services Center, Benton 72015	778-1111
GP	McClard, P. Helen	Post Office Box 655, Mount Ida 71957	867-2105
AN	Porter, Jim C.	Post Office Box D, Benton 72015	776-0052
OM	Ramsay, Rex C.	Post Office Box 300, Bauxite 72011	778-3644
FP	Stewart, David L.	205 Carpenter, Benton 72015	778-8264
FP	Taggart, Sam D.	Post Office Box 969, Benton 72015	778-0934
OBG	Thibault, Frank G., Jr.	910 North East, Benton 72015	778-0426
IM	Thomas, Bill R.	111 McNeil, Benton 72015	778-5740
RD	Thorn, H. B., Jr.	Route 6, Box 1200, Benton 72015 (Res.)	778-4858
GP	Tilley, Roger L.	302 West South, Benton 72015	778-4511
GS	Viner, Donald L.	105 McNeil, Benton 72015	778-7435
FP	Wright, John D.	321 Short, Benton 72015	776-0603

SCOTT COUNTY

GS	Ahmed, S. A.	Post Office Box 547, Waldron 72958	637-3135
#	Wright, Harold B.	Waldron	

SEBASTIAN COUNTY

PD	Aclin, Richard R.	500 South 16th, Fort Smith 72901	783-1085
#	Adams, William F.	Van Buren	
R	Albers, David G.	Post Office Box 1827, Fort Smith 72902	782-5035
ORS	Alberty, Joe P.	7303 Rogers Avenue, Fort Smith 72903	452-3500
EM	Alexander, R. Kent	1311 South "I", Fort Smith 72901	441-4381
GS	Anderson, Paul M.	1501 South Waldron, Fort Smith 72903	452-9316
OBG	Atkins, Jimmie G.	1500 Dodson, Fort Smith 72901	782-2071
GP	Bailey, Charles W.	Post Office Box 426, Greenwood 72936	996-4111
P	Baker, Max A.	2112 South Greenwood, Fort Smith 72901	783-4621
IM	Barker, Robert C., Jr.	1500 Dodson, Fort Smith 72901	782-2071
HEM	Barnes, L. Ford	Post Office Box 3528, Fort Smith 72913	452-2077
AN	Berryhill, Richard E.	216-A North Greenwood, Fort Smith 72901	783-1497
OBG	Berumen, Mike	Post Office Box 3528, Fort Smith 72913	452-2077
GE	Bordeaux, Ronald A.	Post Office Box 3528, Fort Smith 72913	452-2077
D	Bradford, A. C.	Post Office Box 3528, Fort Smith 72913	452-2077
P	Bradley, Joe F.	2112 South Greenwood, Fort Smith 72901	785-2361
R	Broadwater, John R.	1500 Dodson, Fort Smith 72901	782-2071
ORS	Brown, Byron L.	100 North 16th, Fort Smith 72901	783-3604
RD	Brown, James A.	6810 South "T", Fort Smith 72903 (Res.)	452-1231
R	Brown, Richard N.	1501 South Waldron, Fort Smith 72903	452-9416
ORS	Buie, James H.	1500 Dodson, Fort Smith 72901	782-2071
FP	Busby, J. David	100 South 14th, Fort Smith 72901	785-2431
PD	Cabell, Ben B.	312 South 16th, Fort Smith 72901	782-7921
R	Cassady, Calvin R.	Post Office Box 1827, Fort Smith 72902	782-5035
P	Chambers, A. Pat	1500 Dodson, Fort Smith 72901	782-2071
AN	Chamblin, Don W.	1500 Dodson, Fort Smith 72901	782-2071
AN	Chester, Robert L.	1500 Dodson, Fort Smith 72901	782-2071
TS	Clemmons, Edward E.	522 South 16th, Fort Smith 72901	785-1413
AN	Coffman, Edwin L.	1500 Dodson, Fort Smith 72901	782-2071
NEP	Coleman, Michael D.	1500 Dodson, Fort Smith 72901	782-2071
CRS	Crigler, Ralph E.	1500 Dodson, Fort Smith 72901	782-2071
R	Crow, Neil E., Sr.	1500 Dodson, Fort Smith 72901	782-2071
R	Culp, W. C.	1501 South Waldron, Fort Smith 72903	452-9416
RD	Cunningham, Charles S.	212 Mockingbird Lane, Poteau, Oklahoma 74953 (Res.)	918-647-4904
PTH	Davenport, O. Leo	923 Lexington, Fort Smith 72901	785-1447
CD	Deaton, John M.	1500 Dodson, Fort Smith 72901	782-2071
PD	deMiranda, Fred C.	1501 South Waldron, Fort Smith 72903	452-8311
P	Desrochers, Paul E.	7303 Rogers, Fort Smith 72903	452-9115
P	Dorzab, Joe H.	1500 Dodson, Fort Smith 72901	782-2071
FP	Dudding, William F.	3104 Executive Park, Fort Smith 72903	452-9012
NS	Dulligan, Michael P.	1500 Dodson, Fort Smith 72901	785-1110
FP	Durmon, Beuford T.	100 South 14th, Fort Smith 72901	785-2431
IM	Edmondson, Steve A.	320 North Greenwood, Fort Smith 72901	782-4470
OBG	Ellis, Homer G.	Post Office Box 3507, Fort Smith 72913	785-2411
R	Erickson, Clark A.	1500 Dodson, Fort Smith 72901	782-2071
OPH	Faier, S. Z.	1500 Dodson, Fort Smith 72901	782-2071
ONC	Fecher, Dennis R.	1500 Dodson, Fort Smith 72901	782-2071
U	Feder, Frederick P.	520 Lexington, Fort Smith 72901	782-7261
FP	Feild, T. A., III	3600 North "O", Fort Smith 72904	783-5158
OPH	Felker, Gary V.	3000 Rogers, Fort Smith 72901	782-8892
AN	Fisher, Robert D.	1500 Dodson, Fort Smith 72901	782-2071
PD	Floyd, Charles H.	617 South 16th, Fort Smith 72901	783-3165
U	Francis, Darryl R., II	520 Lexington, Fort Smith 72901	782-7261
OTO	Gedosh, Edgar A.	600 South 16th, Fort Smith 72901	782-6022
R	Gill, James A.	Post Office Box 1827, Fort Smith 72902	782-5035
CD	Gilliland, J. Campbell	1500 Dodson, Fort Smith 72901	782-2071
PTH	Girkin, R. Gene	923 Lexington, Fort Smith 72901	785-1447
OBG	Glover, D. Bruce	Post Office Box 3507, Fort Smith 72913	785-2411
PS	Goodman, R. Cole	1500 Dodson, Fort Smith 72901	782-2071
AN	Goodman, Raymond C.	1500 Dodson, Fort Smith 72901	782-2071
EM	Graves, Stephen C.	7301 Rogers, Fort Smith 72903	452-5100
N	Griggs, William L.	1500 Dodson, Fort Smith 72901	782-2071
U	Hamblin, David W.	2917 South 74th, Fort Smith 72903	452-8400
ORS	Hathcock, Alfred B.	1500 Dodson, Fort Smith 72901	782-2071
GS	Hawkins, S. Wright	Post Office Box 3528, Fort Smith 72913	452-2077
PUD	Heard, W. Don	1500 Dodson, Fort Smith 72901	782-2071
AN	Herren, Adrian L.	216-A North Greenwood, Fort Smith 72901	783-1497
U	Hewett, Archie L.	600 South 14th, Fort Smith 72901	785-2604
P	Hill, James H.	1500 Dodson, Fort Smith 72901	782-2071
IM	Hinkle, Richard A., Jr.	1501 South Waldron, Fort Smith 72903	452-8753
OBG	Hoffman, John D.	Post Office Box 3528, Fort Smith 72913	452-2077
GS	Hoge, Marlin B.	1501 South Waldron, Fort Smith 72903	452-9316
CD	Holman, William A.	Post Office Box 3528, Fort Smith 72913	452-2077
GS	Holmes, Williams C., Jr.	Post Office Box 3528, Fort Smith 72913	452-2077
ADM	Hornberger, E. Z.	1311 South "I", Fort Smith 72901	441-5440
A	Howell, James T.	1420 South "I", Fort Smith 72901	782-2983
OPH	Hughes, Robert P.	3000 Rogers, Fort Smith 72901	782-8892
R	Huskison, William T.	1501 South Waldron, Fort Smith 72903	452-9416
OBG	Hyde, Marshall L.	Post Office Box 3507, Fort Smith 72913	785-2411
FP	Ingram, Ralph N.	1120 Lexington, Fort Smith 72901	785-2655
ORS	Irwin, Peter J.	1500 Dodson, Fort Smith 72901	782-2071
GS	Janes, Robert H., Jr.	1500 Dodson, Fort Smith 72901	782-2071
RD	Jones, W. Duane	5610 South Enid, Fort Smith 72903 (Res.)	452-0484
GYN	Kelsey, J. F.	Post Office Box 3507, Fort Smith 72913	785-2411
RD	Kennedy, Virgil N.	5417 Grand, Fort Smith 72904 (Res.)	452-3351
IM	Kientz, John	1500 Dodson, Fort Smith 72901	782-2071
CD	Klopfenstein, Keith	1500 Dodson, Fort Smith 72901	782-2071

Type of Practice	Member's Name	Address	Telephone Number
ORS	Knight, W. E.	1500 Dodson, Fort Smith 72901	782-2071
END	Kocher, David B.	Post Office Box 3528, Fort Smith 72913	452-2077
PTH	Koenig, Albert S., Jr.	923 Lexington, Fort Smith 72901	785-1447
PTH	Koenig, A. Samuel, III	923 Lexington, Fort Smith 72901	785-1447
OBG	Kradel, R. Paul	Post Office Box 3528, Fort Smith 72913	452-2077
FP	Kramer, Ralph G.	603 Lexington, Fort Smith 72901	783-8917
FP	Kutait, Kemal E.	1120 Lexington, Fort Smith 72901	785-2655
IM	Lambiotte, Louis O.	1500 Dodson, Fort Smith 72901	782-2071
PTH	Landrum, Annette V.	100 South 14th, Fort Smith 72901	785-2431
GS	Landrum, Samuel E.	522 South 16th, Fort Smith 72901	785-4181
OTO	Lane, Charles S., Jr.	600 South 16th, Fort Smith 72901	782-6022
AN	Lenington, Jerry O.	1500 Dodson, Fort Smith 72901	782-2071
IM	Lewing, Hugh S.	404 South 16th, Fort Smith 72901	783-3158
D	Lewis, John E.	1500 Dodson, Fort Smith 72901	782-2071
FP	Lilly, Ken E.	1120 Lexington, Fort Smith 72901	785-2655
NS	Lockhart, William G.	1500 Dodson, Fort Smith 72901	782-2071
GS	Lockwood, Frank M.	1500 Dodson, Fort Smith 72901	782-2071
ORS	Long, James W.	1500 Dodson, Fort Smith 72901	782-2071
NS	MacDade, Albert D.	1500 Dodson, Fort Smith 72901	782-2071
D	Magness, Jack L., Jr.	Post Office Box 3528, Fort Smith 72913	452-2077
CD	Manus, Stephen C.	Post Office Box 3528, Fort Smith 72913	452-2077
IM	Martin, Art B.	1500 Dodson, Fort Smith 72901	782-2071
FP	Martin, Maurice C. "Rick"	Post Office Box 426, Greenwood 72936	996-4111
OBG	Mason, Joe N.	1500 Dodson, Fort Smith 72901	782-2071
GE	Masri, Hassan M.	1500 Dodson, Fort Smith 72901	782-2071
GP	Meador, Don M.	3600 North "O", Fort Smith 72904	783-5158
R	Miller, Robert C.	1500 Dodson, Fort Smith 72901	782-2071
GS	Mings, Harold H.	1500 Dodson, Fort Smith 72901	782-2071
GP	Mitchell, Bob G.	1003 Lexington, Fort Smith 72901	782-3728
OPH	Moulton, Everett C., Jr.	7303 Rogers, Fort Smith 72903	452-9043
OPH	Moulton, Everett C., III	7303 Rogers, Fort Smith 72903	452-9043
	Mulder, George D.	(Address unknown)	
ORS	Mumme, Marvin E.	1500 Dodson, Fort Smith 72901	782-2071
RD	Murchison, Roary A.	19 Haven Drive, Fort Smith 72901 (Res.)	782-5323
OBG	Muylaert, Michel	1501 South Waldron, Fort Smith 72903	452-8159
PD	McClain, Merle E.	312 South 16th, Fort Smith 72901	782-7921
GP	McDonald, H. P.	2044 North 29th, Fort Smith 72904	782-4833
OPH	McEwen, Stanley R.	3000 Rogers, Fort Smith 72901	782-8892
FP	McKinney, Robert D.	Post Office Box 426, Greenwood 72936	996-4111
IM	McMinimy, D. J.	1500 Dodson, Fort Smith 72901	782-2071
PD	Nassri, Louay	1500 Dodson, Fort Smith 72901	782-2071
**FP	Nelson, Steve B.	100 South 14th, Fort Smith 72901	785-2431
PUD	Nichols, David R.	1500 Dodson, Fort Smith 72901	782-2071
D	Niemann, Jeffrey M.	316 Lexington, Fort Smith 72901	783-1121
CD	Nolewajka, Andre J.	Post Office Box 3528, Fort Smith 72913	452-2077
GS	Olson, John D.	1500 Dodson, Fort Smith 72901	782-2071
GE	Paris, Charles H.	Post Office Box 3528, Fort Smith 72913	452-2077
PD	Parker, Joel E., Jr.	617 South 16th, Fort Smith 72901	783-3165
IM	Parker, Stephen M.	320 North Greenwood, Fort Smith 72901	782-4470
R	Parker, Thomas G.	1501 South Waldron, Fort Smith 72903	452-9416
CDS	Patrick, Donald L.	1500 Dodson, Fort Smith 72901	782-2071
IM	Pence, Eldon D., Jr.	1501 South Waldron, Fort Smith 72903	452-8753
EM	Perrymore, W. Dale	7301 Rogers, Fort Smith 72903	452-5100, Ext. 2401
GYN	Phillips, W. P.	Post Office Box 3507, Fort Smith 72913	785-2411
FP	Pillstrom, Lawrence G.	1120 Lexington, Fort Smith 72901	785-2655
IM	Poe, McDonald, Jr.	1501 South Waldron, Fort Smith 72903	452-8753
OBG	Poole, M. Louis	1501 South Waldron, Fort Smith 72903	452-8158
CD	Pope, John R.	1500 Dodson, Fort Smith 72901	782-2071
PD	Post, James M.	617 South 16th, Fort Smith 72901	783-3165
IM	Pradel, Paul A.	1501 South Waldron, Fort Smith 72903	452-8753
CD	Prewitt, Taylor A.	Post Office Box 3528, Fort Smith 72913	452-2077
IM	Price, Lawrence C.	404 South 16th, Fort Smith 72901	783-3158
NEP	Rabideau, Dana P.	1500 Dodson, Fort Smith 72901	782-2071
OTO	Raymond, Thomas H.	600 South 16th, Fort Smith 72901	782-6022
N	Reul, Charles G.	1500 Dodson, Fort Smith 72901	782-2071
EM	Reyenga, Stan L.	1311 South "I", Fort Smith 72901	441-5011
R	Rogers, Paul L.	1501 South Waldron, Fort Smith 72903	452-9416
FP	Ross, R. Wendell	1120 Lexington, Fort Smith 72901	785-2655
R	Russell, Rex D.	1500 Dodson, Fort Smith 72901	782-2071
AN	Safranek, Edward J.	216-A North Greenwood, Fort Smith 72901	783-1497
GS	Saviers, Boyd M.	1500 Dodson, Fort Smith 72901	782-2071
AN	Schemel, William H.	216-A North Greenwood, Fort Smith 72901	783-1497
IM	Schwarz, Paul R.	404 South 16th, Fort Smith 72901	783-3159
N	Serrano, Ernest E.	1500 Dodson, Fort Smith 72901	782-2071
GYN	Sherman, Robert L.	Post Office Box 3507, Fort Smith 72913	785-2411
GP	Shermer, Jonathan P.	623 South 21st, Fort Smith 72901	783-1520
ORS	Sherrill, William M., Jr.	1500 Dodson, Fort Smith 72901	782-2071
PTH	Sigler, John K., Jr.	923 Lexington, Fort Smith 72901	785-1447
ORS	Skagerberg, David G.	1500 Dodson, Fort Smith 72901	782-2071
**FP	Smith, Charles E.	100 South 14th, Fort Smith 72901	442-7352
PTH	Smith, Kent	923 Lexington, Fort Smith 72901	785-1447
FP	Smith, Terrald J.	100 South 14th, Fort Smith 72901	785-2431
R	Snider, James R.	1500 Dodson, Fort Smith 72901	782-2071
IM	Staggs, J. David	1500 Dodson, Fort Smith 72901	782-2071
ORS	Stanton, W. B.	7303 Rogers, Fort Smith 72903	452-8121
GP	Stewart, John B.	603 Lexington, Fort Smith 72901	783-8917
PUD	Stewart, Jerry R.	Post Office Box 3528, Fort Smith 72913	452-2077
PS	Still, Eugene F., II	1500 Dodson, Fort Smith 72901	782-2071
FP	Swena, Richard R.	302 North 13th, Fort Smith 72901	785-2425
OBG	Tate, William B.	1500 Dodson, Fort Smith 72901	782-2071
RD	Thompson, J. Kenneth	3804 Free Ferry, Fort Smith 72903 (Res.)	783-5711
GP	Thompson, James B.	605 Lexington, Fort Smith 72901	782-6081
FP	Thompson, Robert J.	605 Lexington, Fort Smith 72901	782-6081
IM	Trauth, Christopher J.	1500 Dodson, Fort Smith 72901	782-2071
HEM	Turner, William F.	1500 Dodson, Fort Smith 72901	782-2071
D	Vanderpool, Roy E.	Post Office Box 3528, Fort Smith 72913	452-2077
FP	Venturina, Arturo P.	Post Office Box 296, Huntington 72940	928-4404
CDS	Vernon, Rowland P., Jr.	1500 Dodson, Fort Smith 72901	782-2071
U	Wahman, Gerald E.	1500 Dodson, Fort Smith 72901	782-2071
OPH	Wallace, Kenneth K.	3000 Rogers, Fort Smith 72901	782-8892
PD	Walling, Robert V.	617 South 16th, Fort Smith 72901	783-3165
PD	Watts, John C.	500 South 16th, Fort Smith 72901	783-1085
PUD	Webb, William K.	Post Office Box 3528, Fort Smith 72913	452-2077
GS	Weisse, John J.	912 Lexington, Fort Smith 72901	785-2616
HEM	Wells, John D.	Post Office Box 3528, Fort Smith 72913	452-2077
EM	Westbrook, Michael R.	1311 South "I", Fort Smith 72901	441-5011
AN	Westermann, Norman F.	1500 Dodson, Fort Smith 72901	782-2071

Type of Practice	Member's Name	Address	Telephone Number
GYN	Whitaker, T. J., Jr.	1823 Dodson, Fort Smith 72901	782-4929
IM	White, J. Earle, III	1501 South Waldron, Fort Smith 72903	452-8661
#	Whittaker, L. A.	Fort Smith	
ORS	Wideman, John W.	7303 Rogers, Fort Smith 72903	452-8121
GS	Wikman, John H.	1500 Dodson, Fort Smith 72901	782-2071
CDS	Williams, Carl L.	522 South 16th, Fort Smith 72901	785-1413
CD	Williams, Thomas N.	1500 Dodson, Fort Smith 72901	782-2071
OTO	Wills, Paul I.	600 South 16th, Fort Smith 72901	782-6022
U	Wilson, Carl L.	1500 Dodson, Fort Smith 72901	782-2071
U	Wilson, Morton C.	1500 Dodson, Fort Smith 72901	782-2071
U	Wilson, Steven K.	1500 Dodson, Fort Smith 72901	782-2071
CDS	Woods, Leon P.	1500 Dodson, Fort Smith 72901	782-2071
R	Worrell, John A.	1501 South Waldron, Fort Smith 72903	452-9416
CDS	Zufari, Munir M.	905 Lexington, Fort Smith 72901	783-8888

SEVIER COUNTY

GP	Brown, Olie D., Jr.	Post Office Drawer 890, DeQueen 71832	642-2465
FP	Buffington, Michael L.	105 West North, Magnolia 71753	234-8820
FP	Carlson, Kevin R.	North 4th and Heynecker, DeQueen 71832	642-2840
FP	Daniel, J. Frank	Highway 70 West, DeQueen 71832	642-2022
RD	Dickinson, George W.	6170 Danita, Fayetteville 72701 (Res.)	443-0302
FP	Jones, Charles N.	Highway 70 West, DeQueen 71832	642-2022
GP	Pierce, Joseph B.	Post Office Drawer 890, DeQueen 71832	642-2465
R	Williams, W. Curtis	Highway 70 West, DeQueen 71832	642-2022

ST. FRANCIS COUNTY

OBG	Barker, Charles L.	1712 Lindauer Road, Forrest City 72335	633-7051
GP	Cogburn, Harold N.	328 Kittel Road, Forrest City 72335	633-1425
GP	Collins, E. Morgan, Jr.	1801 Lindauer Road, Forrest City 72335	633-1952
FP	Crawley, C. E.	328 Kittel Road, Forrest City 72335	633-1425
OBG	DeRossitt, James P.	1712 Lindauer Road, Forrest City 72335	633-7051
GP	Fong, Fun Hung	Post Office Box 735, Hughes 72348	339-2373
GS	Gerritsen, Roy W.	1600 Lindauer Road, Forrest City 72335	633-4896
FP	Hammons, Edward P.	328 Kittel Road, Forrest City 72335	633-1425
#	Laney, J. Neal	Forrest City	
FP	McGuire, Samuel A.	328 Kittel Road, Forrest City 72335	633-1425
GP	McPhail, George T.	1801 Lindauer Road, Forrest City 72335	633-1952
FP	Seibel, Donald G.	318 East Cook, Forrest City 72335	633-5656
FP	Woollam, Christopher J.	318 East Cook, Forrest City 72335	633-5656

TRI-COUNTY

R	Allen, Lewis G.	Eastern Ozarks Community Hospital, Hardy 72542	257-4101
GP	Arnold, Carl B.	Post Office Box 457, Salem 72576	895-3281
GP	Benton, Thomas H.	Post Office Box 366, Salem 72576	895-2990
FP	Bozeman, Jimmy G.	Family Clinic, Salem 72576	895-2541
GP	Ducker, David E.	Post Office Box 547, Salem 72576	895-3215
GS	Grasse, A. Meryl	Post Office Box 438, Calico Rock 72519	297-3726
RD	Krygier, Albin J.	306 Royal Drive, Horseshoe Bend 72512 (Res.)	670-5865
FP	Lane, Robert C.	Post Office Box 617, Calico Rock 72519	297-3726
FP	Meisenheimer, Martin P., III	Post Office Box 1067, Cherokee Village 72525	257-3929
FP	Moody, Michael N.	Post Office Box 829, Salem 72576	895-2541
GP	McCormack, John M.	Post Office Box 250, Mammoth Spring 72554	625-3228
FP	Smith, James F.	Post Office Box 155, Horseshoe Bend 72512	670-5145
GP	Tatum, Harold M.	Post Office Box D, Melbourne 72556	368-4344
FP	Villines, Gary W.	Medical Center Clinic, Calico Rock 72519	297-3727
FP	Young, Timothy D.	South Allegheny, Hardy 72542	856-3213

UNION COUNTY

U	Bowman, Raymond N.	619 North Newton, El Dorado 71730	862-5439
ORS	Callaway, James C.	705 West Faulkner, El Dorado 71730	863-6123
FP	Carroll, Peter J.	416 North Newton, El Dorado 71730	862-5573
OM	Clowney, A. R.	460 West Oak, El Dorado 71730	863-8116
OTO	Cyphers, C. D.	519 West Faulkner, El Dorado 71730	862-3471
GP	Dunn, Tom L.	Post Office Box 538, Hampton 71744	798-4272
PTH	Duzan, Kenneth R.	443 West Oak, El Dorado 71730	862-1351
PTH	Elliott, Wayne G.	443 West Oak, El Dorado 71730	882-1351
IM	Ellis, Jacob P.	490 West Faulkner, El Dorado 71730	863-2381
RD	Fitch, Leston E.	38 Meadowbrook Drive, Conway 72032 (Res.)	329-3230
IM	Flournoy, Durwood W.	714 West Faulkner, El Dorado 71730	862-5184
P	Fraser, David B.	715 North College, El Dorado 71730	862-7921
ORS	Giller, W. John, Jr.	705 West Faulkner, El Dorado 71730	863-6123
IM	Gray, Carlos E.	490 West Faulkner, El Dorado 71730	863-2286
IM	Hardin, Alvin S.	714 West Faulkner, El Dorado 71730	862-5184
GS	Harper, John W.	425 West Oak, El Dorado 71730	863-5135
ORS	Hartmann, Ernest R.	619 West Grove, El Dorado 71730	863-5146
FP	Hill, Grady E.	427 West Oak, El Dorado 71730	863-7158
PTH	Jennings, R. Duke	443 West Oak, El Dorado 71730	862-1351
GE	Jones, Steve A.	714 West Faulkner, El Dorado 71730	862-5184
D	Jucas, John J.	525 West Faulkner, El Dorado 71730	862-5485
R	King, Billy D.	460 West Oak, El Dorado 71730	863-2587
OPH	Landers, Gardner H.	318 Thompson, El Dorado 71730	862-4216
PD	Lewis, Rick J.	Post Office Box 851, Hampton 71744	798-4299
FP	Maud, Patricia A.	Post Office Box 851, Hampton 71744	798-4299
GS	Menendez, Moises A.	412 North Washington, El Dorado 71730	862-3411
FP	Moore, Berry L., Jr.	490 West Faulkner, El Dorado 71730	863-2362
GS	Moore, John H.	412 North Washington, El Dorado 71730	862-3411
U	Murfee, Robert M.	619 North Newton, El Dorado 71730	862-5439
PD	McKinney, J. Schuler	209 Thompson, El Dorado 71730	862-4994
R	Parkman, Robert L., Jr.	460 West Oak, El Dorado 71730	863-2253
R	Pellizzetti, A. G.	Post Office Box 1497, El Dorado 71730	864-3366
OTO	Pillsbury, Richard C.	423 Thompson, El Dorado 71730	863-0010
AN	Pinkerton, R. E.	700 West Grove, El Dorado 71730	864-3484
IM	Pirnique, Allan S.	714 West Faulkner, El Dorado 71730	862-5184
OBG	Rabie, Fouad M.	431 West Oak, El Dorado 71730	863-4101
#	Riley, Warren S.	El Dorado	
PD	Rogers, Henry B.	209 Thompson, El Dorado 71730	862-4994
D	Sample, Dorothy C.	525 West Faulkner, El Dorado 71730	862-5485
R	Schultz, Wayne H.	460 West Oak, El Dorado 71730	863-2589
GS	Scurlock, W. R.	412 North Washington, El Dorado 71730	862-3411
GP	Seale, J. E., Jr.	528 West Faulkner, El Dorado 71730	863-7154
FP	Smith, George W.	704 West Grove, El Dorado 71730	862-7661
AN	Stevens, Willis M.	460 West Oak, El Dorado 71730	863-2275
PD	Sykes, James D.	306 Thompson, El Dorado 71730	862-2552

Type of Practice	Member's Name	Address	Telephone Number
FP	Sykes, Robert R.	416½ North Newton, El Dorado 71730	862-5571
OBG	Thibault, Frank G., Sr	416 North Newton, El Dorado 71730	862-5403
GS	Tommey, C. E.	412 North Washington, El Dorado 71730	862-3412
OBG	Turnbow, R L.	427 West Oak, El Dorado 71730	863-6157
PD	Vyas, Dileepkumar R	317 Thompson, El Dorado 71730	862-8961
FP	Warren, George W	Post Office Box W, Smackover 71762	725-3471
IM	Weedman, James B	714 West Faulkner, El Dorado 71730	862-5184
OPH	Williamson, John R	318 Thompson, El Dorado 71730	862-4216
IM	Wilson, Larkin M	714 West Faulkner, El Dorado 71730	862-5184
OPH	Wilson, Paul H.	514 West Faulkner, El Dorado 71730	862-5352
OTO	Wise, J. F.	615 West Grove, El Dorado 71730	862-7918
IM	Wu, William	317 Thompson, El Dorado 71730	863-5521
GS	Yocum, David M., Jr	412 North Washington, El Dorado 71730	862-3411
ONC	Zahniser, Donna J.	425 Thompson, El Dorado 71730	862-0532

VAN BUREN COUNTY

GP	Hall, John A.	Post Office Box 310, Clinton 72031	745-2111
GP	Pearce, Charles G.	Post Office Box 51, Clinton 72031	745-2412
RD	Read, Paul S	Route 2, Box 424, Fairfield Bay 72088 (Res.)	884-3939
FP	Stuteville, Orion H.	Route 1, Box 307, St. Joe 72675 (Res.)	439-2555
GS	Tahir, Syed Z.	Post Office Box N, Clinton 72031	745-7161

WASHINGTON COUNTY

D	Albright, Spencer D., III	1925 Green Acres Road, Fayetteville 72701	443-3413
GP	Applegate, C. Stanley	220 Meadow Avenue, Springdale 72764	751-4637
ORS	Arnold, James A	Post Office Drawer 1608, Fayetteville 72702	521-2752
GP	Baggett, Jeff J	Post Office Box 233, Prairie Grove 72753	846-3886
OTO	Baker, C. Murl, Jr.	4255 Venetian Lane, Fayetteville 72701	521-1238
FP	Baker, Donald B	241 West Spring, Fayetteville 72701	521-8260
FP	Benjamin, George H	304 South Maxwell, Siloam Springs 72761	524-3141
PTH	Bond, Walter M.	Post Office Box 817, Fayetteville 72702	443-3050
GP	Box, Ivan H.	Post Office Box 797, Huntsville 72740	738-2115
PTH	Boyce, John M	607 Maple, Springdale 72764	751-5711
U	Brandon, Henry B	2100 Green Acres, Fayetteville 72701	442-5229
#	Brizzolara, Charles M.	Little Rock	
U	Brooks, W Ely	Route 9, Box 219, Fayetteville 72701	521-8980
OPH	Brown, Craig J	Post Office Box 1834, Fayetteville 72702	521-5931
FP	Buckley, Carie D., Jr	Post Office Box 959, Fayetteville 72702	442-2822
PD	Burnside, Wade W.	207 East Dickson, Fayetteville 72701	443-3471
IM	Butler, G Harrison	675 Lollar Lane, Fayetteville 72701	521-8200
FP	Capps, James A., Jr	Post Office Box 1203, Fayetteville 72702	521-0610
FP	Chalfant, Charles H.	600 Razorback Road, Fayetteville 72701	575-4451
R	Cherry, James F.	607 Maple, Springdale 72764	751-5711
RD	Clark, P LeMon	1679 Elmwood, Fayetteville 72701 (Res.)	521-7657
ORS	Coker, Tom P.	Post Office Drawer 1608, Fayetteville 72702	521-2752
OBG	Cole, George R	740 Lollar Lane, Fayetteville 72701	521-4433
OBG	Councille, Clifford C., Jr.	1011 North College, Fayetteville 72701	442-9809
AN	Covey, M Carl	Post Office Box 800, Gentry 72734	736-8699
AN	Crawford, Perry F.	Post Office Box 1621, Fayetteville 72702	521-8843
NEP	Crittenden, David R	100-A East Poplar, Fayetteville 72701	442-5295
OTO	Crocker, Thermon R.	4255 Venetian Lane, Fayetteville 72701	521-1238
FP	Dean, David B.	304 South Maxwell, Siloam Springs 72761	524-3141
PD	Decker, Harold A.	207 East Dickson, Fayetteville 72701	443-3471
OBG	DeSandre, Frank A.	606 South Young, Springdale 72764	751-6284
AN	Dodson, C Dwight	946 California, Fayetteville 72701	443-3387
RD	Dorman, John W	2000 Pin Oak, Springdale 72764 (Res.)	751-4527
EM	Dossey, James D	Post Office Box 1811, Fayetteville 72702	442-1105
N	Dow, R. W	3000 Market, Fayetteville 72701	442-4070
IM	Duncan, Philip E.	675 Lollar Lane, Fayetteville 72701	521-8200
RD	Edmondson, Charles T.	Route 2, Box 473-E, Heber Springs 72543 (Res.)	362-2055
FP	Etherington, Robert A	41 Kingshighway, Eureka Springs 72632	253-9746
P	Finch, Stephen B.	530 North College, #E, Fayetteville 72701	443-3491
OTO	Fincher, G Glen	2100 Green Acres Road, Fayetteville 72701	521-3363
RD	Gardner, Buford M	897 Crossover Road, Fayetteville 72701 (Res.)	443-3174
D	Ginger, John D.	102 West Dickson, Fayetteville 72701	521-2525
PTH	Green, Jess D., Jr	Post Office Box 288, Eureka Springs 72632	253-8070
R	Greenhaw, James J.	205 East Jefferson, Siloam Springs 72761	524-4141
CD	Haisten, James A S.	Post Office Box 186, Springdale 72764	756-9185
IM	Hall, Joe B	675 Lollar Lane, Fayetteville 72701	521-8200
R	Harris, Murray T	Post Office Box 1286, Fayetteville 72702	521-6480
ORS	Harris, W Duke	Post Office Drawer 1608, Fayetteville 72702	521-2752
OBG	Harrison, William F.	1011 North College, Fayetteville 72701	442-9809
FP	Hart, Hamilton R.	767 West North, Fayetteville 72701	521-3600
RD	Hathcock, P Loyce	909 Hall Avenue, Fayetteville 72701 (Res.)	442-4424
PD	Haynes, James E.	207 East Dickson, Fayetteville 72701	443-3471
IM	Hayward, Malcolm L.	675 Lollar Lane, Fayetteville 72701	521-8200
ORS	Heinzelmann, Peter R.	Post Office Drawer 1608, Fayetteville 72702	521-2752
RD	Henry, L. Murphey	Post Office Box 1267, Fayetteville 72702	442-5227
RD	Henry, Louise M.	Post Office Box 1267, Fayetteville 72702	442-5227
OPH	Henry, Morriss M	Post Office Box 1727, Fayetteville 72702	442-5227
IM	Higginbotham, Hugh B.	675 Lollar Lane, Fayetteville 72701	521-8200
FP	Huskins, James D	304 South Maxwell, Siloam Springs 72761	524-3141
A	Hutson, Martha	2100 Green Acres Road, Fayetteville 72701	521-3363
CD	Inlow, Charles W	Post Office Box 186, Springdale 72764	756-9185
P	Jarvis, Fred D., Jr.	219 South Thompson, Springdale 72764	751-7052
NS	Johnson, Jorge H	3000 Market, Fayetteville 72701	443-5245
IM	Johnson, Stephen P.	675 Lollar Lane, Fayetteville 72701	521-8200
P	Jones, Edwin C.	219 South Thompson, Springdale 72764	751-7052
GS	Kendrick, John H	Post Office Box 1519, Springdale 72764	751-3202
PD	Lawson, Wilbur G.	207 East Dickson, Fayetteville 72701	443-3471
RD	Lesh, Ruth E	356 North Washington, Fayetteville 72701 (Res.)	442-2164
RD	Lesh, Vincent O.	356 North Washington, Fayetteville 72701 (Res.)	442-2163
AN	Lesniak, James L.	Post Office Box 1062, Fayetteville 72702 (Res.)	443-2459
PTH	Litton, Eva W	2520 Stanton Avenue, Fayetteville 72701 (Res.)	751-5711
PTH	Litton, Murray A.	Veterans Adm. Medical Center, Fayetteville 72701	443-4301, Ext. 561
OBG	Lushbaugh, Harmon	740 Lollar Lane, Fayetteville 72701	521-4433
GS	Magness, C. R	160-A Poplar, Fayetteville 72701	521-1484
FP	Markland, Linda A.	241 West Spring, Fayetteville 72701	521-8260
IM	Martin, William C.	675 Lollar Lane, Fayetteville 72701	521-8200
OBG	Mashburn, James D.	207 East Dickson, Fayetteville 72701	442-5377
CDS	Miller, Charles H.	Post Office Drawer A, Fayetteville 72702	521-3300
R	Mills, William C., III	Post Office Box 1286, Fayetteville 72702	521-6480
IM	Moore, Arthur F.	675 Lollar Lane, Fayetteville 72701	521-8200
ORS	Moore, James F	Post Office Drawer 1608, Fayetteville 72702	521-2752
GP	Moose, John I	304 South Maxwell, Siloam Springs 72761	524-3141

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GS	Murry, J. Warren	Post Office Drawer A, Fayetteville 72702	521-3300
RD	McAlister, Joseph H.	Route 4, Box 188, Huntsville 72740 (Res)	665-2767
RD	McAllister, Max F.	329 Oakwood, Fayetteville 72701 (Res.)	442-6522
OPH	McDonald, J. E.	461 East Township Road, Fayetteville 72701	521-2555
GP	McEvoy, F. E.	803 Ouandt, Springdale 72764	751-9236
GS	McNair, William R	160-A Poplar, Fayetteville 72701	521-1484
PTH	Nettleship, Mae B.	Post Office Box 817, Fayetteville 72702	443-3050
IM	Painter, Monroe B.	675 Lollar Lane, Fayetteville 72701	521-8200
ORS	Park, John P.	Post Office Drawer 1608, Fayetteville 72702	521-2752
OPH	Parker, Joe C.	700 South Young, Springdale 72764	751-1028
FP	Parker, Lee B., Jr.	241 West Spring, Fayetteville 72701	521-8260
FP	Patrick, James K.	241 West Spring, Fayetteville 72701	521-8260
U	Pickett, James D.	Rt. 9, Box 219, Fayetteville 72701	521-8980
GP	Power, John R.	220 Meadow, Springdale 72764	751-4637
FP	Proffitt, Danny L.	241 West Spring, Fayetteville 72701	521-8260
FP	Puckett, Billy J.	304 South Maxwell, Siloam Springs 72761	524-3141
GYN	Rabon, Nancy A.	Evelyn Hills Shopping Center, Fayetteville 72701	442-8261
R	Riddick, Earl B., Jr.	Post Office Box 1286, Fayetteville 72702	521-6480
R	Riner, Dan M.	607 Maple, Springdale 72764	751-5711, Ext. 240
#	Rolufs, Lloyd S.	Eureka Springs	
OBG	Romine, James C.	740 Lollar Lane, Fayetteville 72701	521-4433
FP	Rouse, Joe P.	767 West North, Fayetteville 72701	521-3600
NS	Runnels, Vincent B.	Post Office Drawer 1608, Fayetteville 72702	521-2752
FP	Sexton, G. A.	Post Office Drawer 4275, Fayetteville 72702	521-5894
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OPH	Sharp, Jim D.	102 West Dickson, Fayetteville 72701	521-4949
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OPH	Singleton, E. Mitchell	Post Office Box 908, Fayetteville 72702	521-4843
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GP	Smith, Austin C.	Post Office Box 797, Huntsville 72740	738-2115
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FP	Weaver, Robert H.	Post Office Box 9, Gentry 72734	736-2213
GP	Wheat, Ed	130 North Spring, Springdale 72764	751-5704
A	Whiteside, Edwin	Post Office Box 1208, Fayetteville 72702	443-5241
FP	Whiting, Tom D.	803 Ouandt, Springdale 72764	751-9236
GP	Wilson, Robert B., Jr.	Post Office Box 797, Huntsville 72740	738-2115
FP	Wilson, Steven C.	767 North, Fayetteville 72701	521-3600
GS	Wood, Jack A.	Post Office Drawer A, Fayetteville 72702	521-3300

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R	Bell, John E.	1300 South Main, Searcy 72143	268-8500
GS	Blue, Glen T.	Post Office Box 159, Searcy 72143	268-2441
CD	Blue, Leon Roby	2900 Hawkins, Searcy 72143	268-5364
GP	Bridges, Michael W.	Post Office Box 560, Bald Knob 72010	724-5197
RD	Brown, Arnold R.	1105 Dobbins, Searcy 72143 (Res.)	268-2545
FP	Citty, Jim C.	2900 Hawkins, Searcy 72143	268-5364
IM	Covey, David C.	2900 Hawkins, Searcy 72143	268-5364
FP	Edwards, Hugh R.	1300 South Main, Searcy 72143	268-5361
R	Elliott, Robert E.	1300 South Main, Searcy 72143	268-8500
GS	Farrar, Henry C.	2900 Hawkins, Searcy 72143	268-5364
IM	Fincher, S. Clark	2900 Hawkins, Searcy 72143	268-5364
FP	Formby, Thomas A.	2900 Hawkins, Searcy 72143	268-5364
OBG	Gardner, J. R.	2900 Hawkins, Searcy 72143	268-5364
PTH	Golleher, James H.	Post Office Box 1128, Searcy 72143	268-7186
ORS	Green, Terry G.	910 East Race, Searcy 72143	268-8677
CD	Henderson, John C.	2900 Hawkins, Searcy 72143	268-5364
GP	Jackson, C. W.	Post Office Box C, Judsonia 72081	729-3413
IM	Johnson, David M.	2900 Hawkins, Searcy 72143	268-5364
FP	Joseph, Eugene A.	1300 South Main, Searcy 72143	268-7143
FP	Killough, Larry R.	1300 South Main, Searcy 72143	268-7143
GP	Kinley, J. Garrett	Post Office Box D-2, Beebe 72012	882-3388
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U	Meacham, Kenneth R.	1300 South Main, Searcy 72143	268-4313
ORS	McCoy, James R.	302 West Center, Searcy 72143	268-4168
OPH	Nevins, William H.	Post Office Box 1054, Searcy 72143	268-2201
FP	Norris, E. Lloyd	Post Office Box D-2, Beebe 72012	882-3300
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D	Rasberry, R. D.	Post Office Box 177, Searcy 72143	268-4322
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GP	Short, W. Harold	Post Office Box 340, Beebe 72012	882-5561
GS	Simpson, James A.	Post Office Box 159, Searcy 72143	268-2441
GP	Smith, Bernard C.	Post Office Drawer C, Bradford 72020	344-2788
N	Smith, Bob W.	Post Office Box 858, Searcy 72143	268-9815
FP	Staggs, David L.	2900 Hawkins, Searcy 72143	268-5364
PD	Stinnett, J. L.	2900 Hawkins, Searcy 72143	268-5364
GP	Tate, Sidney W.	2900 Hawkins, Searcy 72143	268-5364
CD	Weathers, Larry W.	Post Office Box 20, Searcy 72143	268-9869
PD	Weed, David H.	2900 Hawkins, Searcy 72143	268-5364
IM	White, William D.	2900 Hawkins, Searcy 72143	268-5364

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FP	Wilson, Fred E.	Post Office Box 387, McCrory 72101	731-2511

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RD	Draeger, Louis A.	Post Office Box 638, Danville 72833 (Res)	495-2770
GP	Edmondson, Rogers P.	Post Office Box 487, Danville 72833	495-7331
GP	Harris, Walter P.	Post Office Box 487, Danville 72833	495-2714
FP	Hodges, Jerry F.	Post Office Box 337, Dardanelle 72834	229-4172
FP	Luker, Jerome H.	Post Office Box 337, Dardanelle 72834	229-4172
GP	Martin, Damon G. H.	Post Office Box 328, Ola 72853	489-5801
GP	Maupin, James L.	Post Office Box 337, Dardanelle 72834	229-4172

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GP	Pennington, James O.	Post Office Box 68, Ola 72853	489-5241
FP	Ring, Gene D.	Highway 22 West, Dardanelle 72834	229-4172
GP	Russell, Gary W	Highway 22 West, Dardanelle 72834	229-4172

MEMBER-AT-LARGE

Bissada, Nabil K. — Riyadh, Saudi Arabia

CODES FOR TYPE OF PRACTICE

A	Allergy
ADM	Administrative Medicine
AN	Anesthesiology
CD	Cardiovascular Diseases
CDS	Cardiovascular Surgery
CHP	Child Psychiatry
CRS	Colon and Rectal Surgery
D	Dermatology
EM	Emergency Care
END	Endocrinology
FP	Family Practice
GE	Gastroenterology
GER	Geriatrics
GP	General Practice
GPM	General Preventive Medicine
GS	General Surgery
GYN	Gynecology
HEM	Hematology
IM	Internal Medicine
NEP	Nephrology
N	Neurology
NM	Nuclear Medicine
NS	Neurological Surgery
OBS	Obstetrics
OBG	Obstetrics and Gynecology
OM	Occupational Medicine
ONC	Oncology
OPH	Ophthalmology
ORS	Orthopaedic Surgery
OT	Otology
OTO	Otorhinolaryngology
P	Psychiatry
PD	Pediatrics
PDA	Pediatric Allergy
PDC	Pediatric Cardiology
PH	Public Health
PM	Physical Medicine and Rehabilitation
PS	Plastic Surgery
PTH	Pathology
PUD	Pulmonary Diseases
R	Radiology
RHU	Rheumatology
TS	Thoracic Surgery
U	Urology
OS	Other Specialty
RD	Retired
+	Medical Student
*	Intern
**	Resident
F	Fellow
#	Deceased

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University of Arkansas College of Medicine
Thomas A. Bruce, M.D., Dean
4301 West Markham Street
Little Rock, Arkansas 72201
Phone: 661-5000

Meeting Dates

Arkansas Medical Society	Thursday, May 5 - Sunday, May 8, 1983, Hilton Hotel, Fayetteville Thursday, April 12 - Sunday, April 15, 1984, Excelsior Hotel, Little Rock Wednesday, April 17 - Sunday, April 21, 1985, Arlington Hotel, Hot Springs	
American Medical Association House of Delegates	Annual Meeting June 19-23, 1983	Chicago
	Interim Meeting December 4-7, 1983	Los Angeles
	Annual Meeting June 17-21, 1984	Chicago
	Interim Meeting December 2-5, 1984	Honolulu
American Medical Association Leadership Conference	February 17-20, 1983	Downtown Chicago Marriott Chicago

Arkansas Medical Society Insurance Plans

Professional Liability	American Physicians Insurance Exchange 4099 McEwen Road, Suite 200 Dallas, Texas 75234 Phone: (toll free from Arkansas) 1-800-527-1414 (toll free from Texas) 1-800-442-0939
Professional Liability	The St. Paul Companies Little Rock Service Office 108 North Shackleford Road Little Rock, Arkansas 72211 Phone: 223-6700
Professional Overhead Expense Plan Professional Men's Disability Plan	Rather, Beyer and Harper, Agents 362 Prospect Building Little Rock, Arkansas 72207 Phone: 664-8791
Life	Northwestern National Life Insurance Company Meyer F. Marks, Inc. Post Office Box 7267 Little Rock, Arkansas 72217 Phone: 664-7802
Medical, Surgical, Major Medical	Arkansas Blue Cross-Blue Shield Post Office Box 2181 Little Rock, Arkansas 72203 Phone: 378-2000
Workmen's Compensation Dividend Plan	Dodson Insurance Group Post Office Box 559 Kansas City, Missouri 64141 Phone: 816-361-3400

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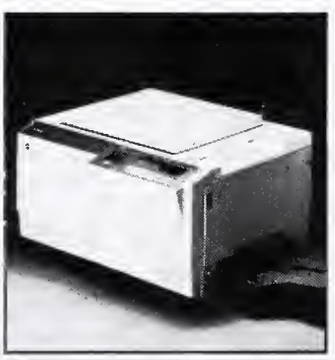
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EP 300



EP 320



EP 530



EP 530R

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SCIENTIFIC ARTICLES

Etiology of Insulin-Dependent Diabetes Mellitus: A Review of the Current Literature 281
Dale Asbury and Albert E. Kalderon, M.D.

Treating Psychiatric Emergencies in Arkansas 286
Gene W. Reid, M.D.

Vitrectomy, A Valuable Means for the Restoration of Vision in Blind Eyes 291
Everett C. Moulton, III, M.D.

FEATURES

ECG of the Month 295
John W. Watson, M.D.

Editorial "Inflammation of the Pancreas" 296
Alfred Kahn, Jr., M.D.

From Other Years 298

Medicine in the News 299

Resolutions 303

Keeping Up 304

Personal and News Items 306

New Members 307

Things to Come 308

Minutes — House of Delegates 309

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Etiology of Insulin-Dependent Diabetes Mellitus: A Review of the Current Literature

Dale Asbury* and Albert E. Kalderon, M.D.†**

The earliest description of *diabetes mellitus* is found in the Ebers papyrus dating back to 1500 B.C. In the second century A.D. Aretaeus of Cappadocia named the disease diabetes, the Greek word meaning "to flow through a siphon." "Diabetes," he wrote, "is a strange disease that consists in the flesh and bones running together into the urine." It was not until the 18th century that the sweet-tasting substance was identified as glucose and the word *mellitus,* or "honeyed" was added.

The etiology of diabetes obviously centers on the endocrine pancreas. Paul Langerhans initiated our understanding of the endocrine function of the pancreas in 1869 in his doctoral dissertation by describing first the pancreatic islets. There are no specific gross changes in the pancreas of a diabetic subject; however, in juvenile-onset diabetes the pancreas is often much smaller than normal.[1] Four types of cells are the regular components of the pancreatic islets in man. They are insulin-secreting beta cells, the glucagon-secreting alpha cells, the somatostatin-secreting delta cell and the pancreatic polyeptide-secreting PP cell. In the pancreas of juvenile onset diabetic subjects who have had their disease for more than a year, the islets are composed of narrow cords of small cells. In the past these islets have been regarded as atrophic, but with immunocytochemical methods they have been shown to consist of approximately 2/3 glucagon-secreting cells and the remaining 1/3 somatostatin-secreting cells, with near total depletion of beta cells.

In 1940, von Meyenburg noted mononuclear-cell infiltrates in and around the islets of Langerhans in the pancreas of children in diabetic ketoacidosis and coined the term of insulinitis.[2] There is unanimous agreement that insulinitis is a specific lesion found only in the pancreas of insulin-dependent diabetic subjects early in the course of their disease.[3]

In recent cases of juvenile onset diabetes, areas of islet hyperplasia leading to large islets have been observed. They are composed mainly of beta cells, showing signs of hyperactivity, such as degranulation. Despite these areas of hyperplasia, the total number of beta cells is greatly reduced. Contrary to the classic opinion, the beta cells do not always disappear totally in the years that follow the clinical onset of juvenile onset diabetes. They can still be detected albeit in very low number in 50 percent of the diabetic subjects who have disease for less than 10 years and in 18 percent of those with a longer duration.[3] Despite the intense stimulation to which the few surviving beta cells are subjected in onset diabetes, they rarely show mitosis. On the other hand, in non-diabetic subjects and in elderly diabetic subjects, mitosis may appear in relatively large numbers.

The etiology of insulinitis appears to be similar to the etiology of IDDM. Three factors appear to be of major significance: genetic, immunemediated and environmental insults.

GENETIC FACTORS: Fewer than 20 percent of insulin-dependent diabetic patients have first degree relatives with a diabetic history. In 1976 Pyke, *et al,* reported their findings on more than 100 pairs of diabetic twins, the largest series ever studied.[4] They found that when one twin of a pair developed the disease after age 50, the remaining twin developed diabetes in almost every case. If one twin developed the disease before age 40, the other twin developed it in only half of the cases. The majority of the twins over 50 had noninsulin-dependent diabetes, whereas those less than 40 had, as a rule, the insulin-dependent variety. In addition, Pyke demonstrated that

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there is a strong genetic factor in maturity-onset diabetes but that other factors may be involved in the insulin-dependent variety.

Gamble, in his study of 184 families with two or more diabetic children, suggested that siblings of children who developed diabetes before the age of 16 years were 26 times more likely to develop diabetes than other children.[5]

The histocompatibility antigens (HLA) are proteins on the surface of all cells and have an important role in transplanted tissue being recognized as foreign. The genes coding for the HLA antigens are located on chromosome #6 and occupy four loci along the chromosome, designated ABCD. Each parent will donate a single chromosome #6 with four HLA antigens. Offspring, therefore, will normally share four HLA antigens with each parent.

The accurate identification of HLA haplotypes in families with two or more affected siblings has provided additional evidence for the existence of an HLA-linked gene in IDDM, as illustrated by the observed variance from the expected random zygotic assortment of HLA haplotypes in siblings.[31] If the insulin-dependent form is due to a single autosomal recessive gene on the sixth chromosome, one would expect most, if not all pairs of affected siblings to be haplotype identical for all the HLA chromosome regions; if IDDM is independent of the sixth chromosome, one would expect a random distribution or 25 percent identical for all HLA antigens. In 1976 Cudworth, *et al,* indicated that there is a more than random association, 56 percent haplotype identical, of HLA haplotypes and insulin-dependent diabetes among affected siblings.[6]

Although results from various laboratories differ, the proportion of the diabetic population in Europe and North America with the antigens HLA B8, and to a lesser extent B15, B18 and Cw3, is striking.[7] However, in Japan where HLA B8 occurs rarely and HLA B15 is common in the general population, a different antigen, B22J, is found in a statistically significant number of patients with IDDM.[8]

IMMUNOLOGIC FACTORS: In 1974 Bottazzo, *et al,* using immunofluorescence techniques, demonstrated antibodies in the serum of patients with IDDM broadly reactive with cytoplasmic constitutents of alpha, beta, and delta cells, which he labeled "islet cell antibodies" (ICA).[9] ICA was found in some patients before the onset of disease, whereas it appeared in others only after the development of symptoms. The ICA is present in the serum over a range of concentrations in roughly 65 to 85 percent of cases of insulin-dependent diabetes at the time of diagnoses. After three years of disease, only about 20 percent of patients possess detectable levels of ICA.

Madsbad published in 1980 a study of 399 insulin-dependent diabetic patients from 10 to 40 years old and found the prevalence of ICA to be independent of residual beta cell function, as measured by serum C-peptide levels and independent of age at onset of disease, suggesting that ICA's have no direct role in beta cell destruction.[10]

An islet cell surface antibody (ICSA) was demonstrated by Lernmark in 1978, in the serum of patients with newly diagnosed disease, that appears to be distinct from the ICA described earlier by Bottazzo.[11] Doberson published in 1980 his results of ICSA and beta cell toxicity experiments.[12] In this investigation 36 insulin-dependent diabetic patients, ages less than 16 years (duration of illness not specified), were evaluated for ICSA and ICA. The results showed that serum from patients which contained ICSA and complement lysed rat beta cells *in vitro,* whereas ICSA-positive serum without complement and ICSA-negative serum did not. However, as demonstrated by Doberson, ICSA is not exclusively present in all insulin-dependent diabetic patients.[12] In the tested patients only 23 of the 36 were ICSA-positive and the antibody was also present in many of the nondiabetic first degree relatives. Hence, it was established that the presence of ICSA is independent of the presence or absence of clinical diabetes.

VIRAL ETIOLOGY: The possibility that the etiology of diabetes might be viral was first proposed in 1899 by Harris, a Philadelphia physician, when one of his patients developed diabetes shortly after having had mumps. As a first line of evidence supporting this thesis is the documentation by a number of authors of the increased incidence of new cases of insulin-dependent diabetes, with onsets in either the winter or late summer to early autumn months and a relative decrease in incidence of the disease during the spring and early summer, correlating with the peak incidence of other viral syndromes.[13] A second line of evidence focuses on anecdotal reports by others of the development of diabetes following viral disease, especially mumps.[14]

The best evidence, however, derives from the work done with experimental animals. In 1968 Craighead demonstrated the encephalomyocarditis virus (EMV), that only rarely causes disease in man, producing diabetes in infected mice.[15] When the pancreas of the infected animals was examined, inflammatory infiltrates in the islets and extensive beta cell damage strongly reminiscent of insulinitis were found. Proof of the direct implication of the virus came from Hayashi, who prepared a fluorescein-labeled antibody to EMV with specificity only to EMV-infected cells.[27] These observations showed conclusively that EMV was implicated and might be primarily responsible for the destruction of beta cells.

In 1975 Boucher, *et al,* and later Ross, *et al,* infected 24 different genetically identical strains of mice with EMV.[16,24] Based on the results of glucose tolerance tests after experimental EMV infection, the animals were categorized as "susceptible," with sustained elevated blood levels of glucose tolerance test, and "resistant" group, with no alteration in their glucose tolerance. When two susceptible rats were mated, their offspring were also susceptible; likewise, when two "resistant" rats were crossed, their offspring were also resistant. When a "susceptible" animal was mated with a resistant rat, their offspring were uniformly resistant. Breeding two of the crossbred rats resulted in several susceptible rats, but mostly resistant rats. Incestuous relationships (backcrossing) between the crossbred rats and the resistant parent generated resistant offspring, and crossbred rats mated with susceptible parents generated a split population half resistant and half susceptible, suggesting that at least in this experimental system the predisposition to viral-induced diabetes was carried on a single recessive gene. These experiments left to speculation the mechanism of damage to the beta cells. To differentiate between actual viral damage or viral-induced immune damage, beta cells from susceptible strains were grown in tissue culture and treated with EMV, totally circumventing the immune mechanism. In these experiments the virus destroyed the susceptible beta cells more rapidly than those from resistant strains without the need of an immune mechanism. It has now been conclusively demonstrated that one or more recessive genes influence the viral uptake and replication in the beta cells of animals with a disseminated infection.[28,29]

In 1949 Dalldorf and Papperheimer reported infection in mice with type B coxsackie virus caused severe destruction of acinar cells in the pancrease but spared the islets.[17]

Then, in 1978, Yoon and Notkins passed the coxsackie virus through beta cell cultures 14 times, thereby selecting out the more virulent strains and demonstrated its diabetogenic properties.[25] The same experiment was performed with reovirus, which resulted only in mild pancreatic changes, normal random serum glucose levels, but an abnormal glucose stress test.[26] Rayfield noted similar results with Venezuelan equine encephalitis virus, which is only occasionally responsible for illness in man.[23]

The first evidence that viruses are capable of causing diabetes in humans came in the spring of 1978 when a 10-year-old boy died of ketoacidosis after an influenze-type illness.[18] At autopsy, inflammatory cells in the islets with extensive beta cell destruction were found. A virus similar to but not identical to coxsackie B4 was identified in the fresh pancreatic tissue. Proof that the child's infection had indeed been responsible for the islet cell damage was obtained through innoculation of the isolated virus into several strains of mice known to be susceptible to coxsackie B4 and the others known to be resistant. As expected, in a week, 50 percent of the susceptible mice had developed hyperglycemia and insulinopenia, with islet cell inflammation with viral antigens detected on the beta cells. The virus was also innoculated into human beta cell cultures, which showed viral uptake in 37 percent of the insulin-containing cells. A significant rise in antibody titer in the child's serum to the isolated virus was demonstrated, further substantiating the claim of viral-induced diabetes.

Jenson and Notkins published in 1980 a review of 10,000 juvenile autopsy cases.[19] Two hundred and fifty had documented disseminated viral infection by serology and/or virus isolation and 100 had a "probable viral infection." After histologic examination of the pancreases they observed destruction of beta cells, with acute and/or chronic inflammation of islets in a total of 28 cases, four related to coxsackie virus type B, 20 related to cytomegalovirus, two related to varicella-zoster virus, and two related to eastern equine encephalitis virus.

NONVIRAL FACTORS: Other than viral infections, toxic substances with selectivity to beta

cells can cause diabetes. In 1976, Vacor (N-3-pyridylmethyl N'-P-nitrophenyl urea), a rat poison, was released for use in the United States, and since that time there have been more than 30 cases of severe insulinopenic diabetes mellitus associated with attempted suicide. These patients had a marked insulinopenia without a concomitent reduction in glucagon. In three lethal cases, extensive beta cell destruction was noted. In two of the three cases, ICSA was identified without concomitant insulinitis, with postingestion times of 14h to 18 weeks. In all tissue typed patients at least one high risk HLA allele was found.[20]

In 1976, Like and Rossini induced diabetes in rats by injecting multiple small doses of streptozotocin, a compound chemically similar to vacor, intraperitoneally.[21] In certain inbred strains of mice under these conditions an insulinitis and diabetes was produced. Making the animals immunoincompetent via total body irradiation or by antilymphocyte sera protected the rats from the diabetogenic effect. Passive transfer of the diabetes between these inbred rats by transferring lymphocytes was never accomplished.[21] These investigators also isolated a C-type retrovirus in the beta cells of injured rats, implicating a latent virus.

Craighead, in addition, demonstrated that diabetes failed to develop in viral infected, castrated mice unless androgens were administered.[22] Also, it was observed that glucocorticoids hasten the beta cell destruction in susceptible infected mice and allow beta cell destruction in resistant strains.[16]

In summary, it has now been shown conclusively that there is a genetically inbred susceptibility to IDDM in some people and animal experiments. There also appears to be at least one recessive gene coding for this susceptibility associated with the HLA complex on chromosome #6 in as yet an unspecified manner. However, there may be a separate mechanism of juvenile onset diabetes, although the data is scarce, that does not necessarily incorporate into it a genetic predisposition, but even here the preliminary data does not negate a correlation with high risk HLA alleles.

There can be no doubt that the immune system plays a role in the etiology of diabetes in some instances; however, there are well-documented examples of beta cell destruction in virus-infected laboratory animal and human tissue culture cell lines in which the immune system was totally circumvented. Also, all attempts to passively transfer insulinopenic diabetes by transfusing lymphocytes has failed. Even though there have been reports of diabetes associated with other auto-immune diseases, an auto-immune etiological mechanism of juvenile onset diabetes appears unlikely in the vast majority of cases.

That viruses can cause diabetes in man and animals cannot be disputed and appears to be the most comprehensive theory of beta cell destruction. The questions that remain concern the selectivity of certain viruses in certain cases. It is known that viral entrance into a cell and replication therein is enhanced by the presence of certain cell surface proteins. It is conceivable, therefore, that the genome responsible for diabetic susceptibility codes for cell surface proteins that enhance diabetogenic virus' entrance into the beta cell. This may somewhat correlate with the association with the HLA antigens. After incorporation of the viral DNA or RNA into the beta cell genome, the cell produces virally coded surface proteins recognized as foreign by the host's immune system that evoke an insulinitis.

It has been shown that glucocorticoids hasten the onset of insulinopenia in viral infected susceptible laboratory animals and can actually cause diabetes in viral infected resistant animals. Glucocorticoids have long been used clinically for their immune suppressive properties and are known to have many other side effects. Because an immune mediated mechanism has never been associated in a cause and effect relationship with insulinopenia, whereas several different viral mechanisms have been shown to be directly beta cell cytotoxic, it appears that the predominant effect of insulinitis is beneficial to the beta cell survival *in vivo* and suppressing the immune response allows more rapid viral induced beta cell destruction. This is not to say that the inflammation associated with insulinitis does not contribute to beta cell destruction, only that it appears to be beneficial overall in viral induced diabetes. If one accepts the above premise, a reasonable corollary would implicate a defective immune response to the various viruses involved in beta cell destruction as a prime etiological agent in the etiology of diabetes. A failure to produce adequate amounts of interferon to infection with diabetogenic strains of virus, as demonstrated by Yoon, would support this notion.[30]

Streptozotocin and related compounds must be

diabetogenic by a separate mechanism that should account for the production of islet cell surface antibody and insulinitis. It seems appropriate, therefore, to postulate a beta cell surface derangement secondary to this drug, which makes the cell especially sensitive to the induced immune response or to other cytotoxic *in vivo* mechanism.

The role of castration, sex of patient, and androgens in the etiology of insulin-dependent diabetes remains open to speculation, as does many aspects of this fascinating disease.

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Treating Psychiatric Emergencies in Arkansas

Gene W. Reid, M.D.*

Abstract: Statistics on psychiatric diagnoses seen in the emergency room or medical clinic setting are given. Procedures and necessary requirements for involuntary commitment are discussed. Cases not requiring commitment are divided into categories of 1) drug and alcohol intoxication and withdrawal, 2) acute anxiety, 3) confusion (organic brain syndrome), 4) the depressed patient and 5) the psychotic patient. The essentials of the emergency room mental status examination are discussed. Stressed in the article is the point that a detailed psychiatric diagnosis is not necessary to adequately diagnose and treat a psychiatric patient in the emergency ward.

A psychiatric emergency is said to exist when a patient is suffering from a mental disease and no one knows what to do.[1] We have all been faced with the situation of dealing with an obnoxious drunk, a crying suicidal depressed person, a potentially homicidal or angry person or a simple case of insomnia at one time or another. Just as it is not necessary that you know whether or not a patient suffers from an inflamed appendix or an inflamed gallbladder to make a diagnosis of acute abdomen, neither do you have to make a distinction between endogenous or exogenous depression in order to know how to deal with that effectively in the emergency room setting.

Who comes in? According to Robbins, et al,[2] the three most common types of psychiatric patients seen in the emergency room are as follows: 1. *Affective disorder (depression)* 2. *Alcoholism* 3. *Antisocial personality.*

These will constitute *two-thirds* of the psychiatric diagnoses that you will see in the emergency room. What reasons do patients give for coming to the E.R. which subsequently reveal psychiatric problems? The top ten reasons and their percent of occurrence are given as follows: nervousness, 18%; unable to stop drinking, 13%; somatic symptoms, 12%; to obtain medicine, 12%; depressed, 10%; referred by non-physician, 8%; want to talk with the doctor, 7%; insomnia, 4%; symptoms of depression, 4%; confusion, delusions and/or hallucinations, 4%.[2]

Step #1: The first question you want to answer for yourself when you are dealing with a psychiatric emergency is the following: "Will the patient have to be committed?" If the answer to this question is yes, then your subsequent handling of that patient is going to be different than when the answer is no. Thus, the next information will be important for you to know. The patient may require commitment if he or she is (1) *suicidal,* (2) *homicidal* or (3) *gravely disabled.*[3] Now a person may be *suicidal* if: (1) he says he intends to kill himself, (2) he has committed a "recent overt act," i.e., tried to kill himself, or (3) is believed to be suicidal by relatives or close friends. Strictly speaking, if a person says he intends to kill himself, that does not have to be considered evidence of need of commitment. However, since folks working in the emergency room aren't usually trained psychiatrists, I think it is a good thing to just make it a rule that if the person tells you he intends to kill himself, believe him.

A person may be considered homicidal if: (1) She says she intends to kill someone, (2) she has committed a recent overt act, i.e., tried to kill someone, or (3) is believed to be homicidal by relatives or close friends. As you can see this is basically about the same criteria as that for suicidal commitment.

A person may be considered *"gravely disabled"* for commitment purposes if she is: unable to provide for her own food, clothes, or shelter as a result of mental deficiency as witnessed by observation by a physician and/or reports by relatives, friends or social worker, etc.

Step #2: "Yes, the patient will have to be committed, now what?" 1. Offer hospitalization at and referral to the nearest mental health facility. This could be the psychiatric ward of a general hospital, the State Hospital in Little Rock, or one of the state operated facilities listed in Table I. If the patient accepts this offer, then

TABLE I.
CENTER/CLINIC
QUICK REFERENCE
TELEPHONE DIRECTORY

CITY	
ARKADELPHIA	246-6739
ASHDOWN	898-5528
ASH FLAT	994-2147
AUGUSTA	347-5311
BATESVILLE*	793-4191

*University of Arkansas for Medical Sciences, Slot 506, 4301 West Markham, Little Rock, Arkansas 72205.

BENTON	778-0404
BENTONVILLE	273-9088
BERRYVILLE	423-2758
BLYTHEVILLE	972-4000
BOONEVILLE	675-3909
BRINKLEY	734-2515
CAMDEN	836-5743
CLARENDON	747-3329
CLARKSVILLE	754-8610
CLINTON	745-4584
CONWAY	329-2989
CROSSETT	364-6471
DANVILLE	495-7127
DeQUEEN	584-7115
DERMOTT	538-3212
DUMAS	382-4001
E. MITCHELL CHILDREN'S CENTER	374-6395
EL DORADO*	862-7921
EUDORA	355-2509
FORREST CITY	633-8421
FORT SMITH*	452-6650
HARRISON	741-8216
HEBER SPRINGS	362-2207
HELENA*	338-6741
HOPE	777-2191
HORSESHOE BEND	670-5145
HOT SPRINGS*	624-7111
HUNTSVILLE	738-2878
JASPER	446-2284
JONESBORO*	972-4000
LAKE VILLAGE	265-5623
LEWISVILLE	921-4439
LITTLE ROCK (GLR-CMHC)*	664-4500
FULLERTON ADOLESCENT	664-4500
CHILD STUDY CENTER	661-5800
MAGNOLIA	234-7500
MALVERN	322-5236
MARKED TREE	972-4000
MARIANNA	295-6321
MARSHALL	448-3724
McCRORY	731-2543
McGEHEE	222-3107
MELBOURNE	378-4397
MENA	394-5277
MONTICELLO*	367-2461
MORRILTON	354-1561
MT. IDA	867-2175
MOUNTAIN HOME*	425-6901
MOUNTAIN VIEW	269-8100
MURFREESBORO	285-2182
NASHVILLE	845-3110
NEWPORT	523-8114
NO. LITTLE ROCK (CENTRAL ARK)*	758-6922
NO. LITTLE ROCK (FAMILY SERV)	758-1516
OSCEOLA	972-4000
OZARK	667-2497
PARAGOULD	972-4000
PARIS	963-2140
PARKIN	775-5481
PERRYVILLE	889-5185
PIGGOTT	972-4000
PINE BLUFF*	534-1834
POCAHONTAS	972-4000
RISON	325-6298
RUSSELLVILLE*	968-1298
SALEM	895-3170
SEARCY	268-4181
SHERIDAN	942-5101
SPRINGDALE*	751-7052
STAR CITY	628-4181
STUTTGART	673-1633
TEXARKANA*	773-4655
VAN BUREN	452-6650
WALDRON	637-2468
WALNUT RIDGE	972-4000
WARREN	226-2557
WEST MEMPHIS	735-6923
WYNNE	238-8551
YELLVILLE	449-4221

*Main Center in Catchment Area

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he may be referred directly to the admitting facility and the case is closed for ER purposes. 2. If the voluntary hospitalization is refused, call the psychiatrist on call. 3. If there is no psychiatrist available, you may direct that patient's relatives or friends to commit the patient. 4. If there are no relatives or friends available and you feel that this person should be committed to a state hospital, then you may proceed as follows, and I will quote for you from the Arkansas Civil Commitment Act 817 of 1981.

> "Whenever it appears that a person is homicidal, suicidal, or gravely disabled as defined in Section 1 of this Act and immediate confinement appears to be necessary to avoid harm to such person or others, any law enforcement officer, or any interested citizen may take said person to a hospital or community mental health center or clinic or state mental health facility. A petition as provided in Section 4 of this Act shall be filed in the probate court of the county in which the person resides or is detained within seventy-two (72) hours, and a hearing as provided in Section 5 (a) (1) of this Act shall be held."[3]

What that means is that you can call the sheriff's office and through them arrange to have the person taken to a hospital or mental health center upon your order. The only drawback to this might be a subsequent day in court as a witness. There is no need to be concerned about litigation here. I will quote you another passage from the same Act: "No officer, physician or other person shall be held criminally or civilly liable for his actions pursuant to this Act in the absence of proof of bad faith and/or malice."

Step #3: "No, the patient won't require commitment, now what?" The answer will almost certainly fall into one of five categories: 1. Drug and alcohol patients (a) in withdrawal, or (b) intoxicated, 2. the anxious patient, 3. the depressed patient, 4. the confused patient (organic brain syndrome) or 5. the psychotic patient.

1. *The Drug-Alcohol Patient* (a) in withdrawal: The procedures for handling a patient in acute withdrawal from any medication or drug are very thoroughly covered in the Washington Manual,[4] *The Manual of Psychiatric Therapeutics,*[5] and other good references which should be available to you in the emergency room and will not be discussed in detail. Most importantly, just remember that any withdrawal syndrome, whether it is from alcohol, narcotics, barbiturates, etc., is a *medical* emergency. Treat withdrawal immediately. When your patient is stable he may be admitted to a medical ward or referred to a drug and alcohol detoxification rehabilitation program. He may be referred to the Arkansas State Hospital Unit in Benton, Central Baptist Hospital in Little Rock, if he is a veteran he may be referred to the excellent unit at the North Little Rock VA Hospital, or you may refer to the drug and alcohol unit in Kensett, Arkansas, or various private hospitals and programs which vary from area to area within the state.

Drug and Alcohol Patient (b) intoxicated: For patients who are already intoxicated with alcohol it is usually a good idea just to observe these folks, put them in a quiet place and let them sober up before you try to deal with them. After they are sober, you can refer them properly. If they have been on hallucinogens (LSD, marijuana, PCP, others) place them in a quiet room and support them. Diazepam (Valium) 10 mg. orally or 2-5 mg. IV can be used if the patient is extremely distressed. (However, it is usually better to go ahead and let the patient come down off his trip naturally because Valium can actually *prolong* a drug trip from PCP.) Narcotics: observe; remember that you can use Narcan for respiratory depression, but remember also that it can precipitate withdrawal. Remember that if medical sequelae develop, the patient should be hospitalized on a medical ward.

2. *The Anxious Patient:* Anxiety may present in any number of ways, for example, shortness of breath, tachycardia, palpitations, diaphoresis and other signs of a general sympathetic discharge. For the anxious patient, *let him or her talk to you for awhile.* A good opening remark (after physical exam yields negative findings) is "You seem to be under a lot of stress." *Reassure the patient.* One of the best things that you can tell a patient who is obviously anxious and not psychotic is, "You're not losing your mind." Many times these patients come to the emergency room in the middle of the night just to receive those words. Refer the patient to the nearest mental health facility—post the location in your emergency ward. The patient is instructed to make his own appointment and go in. Do not feel compelled to make an appointment for him. Give him medication for sleep or anxiety as indicated, but no more than three days of psychiatric medication at a time from the emergency room.

Anti-Anxiety Drugs: 1. Hydroxyzine (Vistaril, Atarax), 50-100 mg X 1 and then three times a day PO makes a good anti-anxiety agent for most patients in the emergency room setting. It is safe, nonabusable and works fairly well. 2. If it does not work well on your patient in the emergency room, then give him thioridazine (Mellaril), 10-100 mg PO or give him mesoridazine (Serentil) 10-25 mg IM or also PO. These are very good agents for generalized anxiety and have few side effects as will be discussed shortly. Flurazepam (Dalmane), 15-30 mg or lorazepam (Ativan), 2 mg for sleep are very good. I prefer lorazepam because it has a half life of only 12 hours.

3. *The Depressed Patient:* The depressed patient may tell you he is depressed or he may describe depressive symptoms to you. Examples may be early morning awakening, insomnia, lethargy, patient does not even get dressed in the morning. One of the things we commonly hear is "Doctor, I just go from bed to couch and couch to bed, etc." A patient may complain of having fears and being distraught and crying during the day. They may complain of having work to do at home but not having any energy or inclination whatsoever to do any of it. (1) Ask the patient if he has been thinking about hurting himself or committing suicide. (2) Let the patient talk to you for awhile. This is very important. Reassure the patient and urge him to seek assistance at once. (3) Refer the patient.

Medication for the Depressed Patient: Now the question is, "Which medication to use?" Do *not* prescribe any tricyclic antidepressants, any MAO inhibitors, barbiturates, narcotics or benzodiaze-

pines (Valium, Librium, etc.) for any depressed patient in the ER. Proper medication to use is thioridazine (Mellaril) 25-100 mg PO TID or mesoridizine (Serentil) 10-25 mg IM for agitation and 10-100 mg PO TID as an outpatient medication. Why Mellaril or Serentil for anxiety and depression? 1. They are proven antidepressants.[6,7,8] There are at least two controlled, double blind studies in which thioridazine (Mellaril) was found to be equally effective to imipramine in all cases of depression with the exception of the retarded depressive. 2. These drugs have a very low incidence of extrapyramidal side effects.[5] 3. A fairly low incidence of cardiovascular side effects.[5] There is no abuse potential. 5. Safety: The LD50 for dogs is approximately 800 MG/KG which indicates that a 70 KG man would have to ingest over 50,000 mg of Mellaril to have a 50% chance of mortality from the dose.

4. *The Confused Patient:* The most common cause of confusion in the ER patient is organic brain syndrome of non-psychogenic origin.[15] The following mnomonic is that for the differential diagnosis of coma found in the manual of Surgical Therapeutics.[9] It applies equally well to OBS:

A — Alcohol	T — Trauma
E — Epilepsy	I — Infection
I — Insulin (±)	P — Poisoning
O — Overdose	P — Psychogenic
U — Uremia	S — Shock
	S — Stroke

Rule out non-psychogenic causes for confusion first. The above list is by no means complete, but it sure helps at 2 A.M. when the doctor is as confused as the patient. References 10 and 15 contain detailed lists of organic causes of OBS and drugs which can cause OBS as a side effect.

5. *The Psychotic Patient, Non-Committed:* 1. Urge immediate hospitalization. 2. If the patient refuses, give him antipsychotic medication intramuscularly in the ER and provide outpatient medication and instructions for referral. 3. If the patient is not a candidate for commitment, refuses both voluntary hospitalization and antipsychotic medications and there is no physical ailment, you will have to release him "against medical advice," unless relatives can be enlisted to help.

If the patient is acutely psychotic with extreme agitation, IM haloperidol (Haldol) is the drug of choice. Haldol, 2 to 5 mg IM every 1-2 hours until calm is the best way to medicate a psychotic patient. If the patient is extremely violent or agitated requiring restraint (assuming no head injury) give haloperidol (Haldol) 5 to 10 mg IM every 30 minutes to 1 hour until he becomes calm. I recommend haloperidol (Haldol) for this purpose because it can be given IM in an emergency situation without having to worry about cardiovascular hazards, and has the highest potency per milligram of all antipsychotics.[10,11,12,13]

Outpatient medication that may be prescribed after the crisis is over: Three days' worth of Mellaril, Serentil, or Haldol are okay. Remember that haloperidol (Haldol) has an extremely high incidence of extrapyramidal side effects and a prescription of such should be accompanied by a prescription of benztropin (Cogentin) 2 mg PO daily or if extrapyramidal symptoms occur in the ER, the benztropin (Cogentin) may be given 2 mg IM. Remember if you are in a crisis situation and do not know what to do, call in the proper consultant, i.e., psychiatrist on call, if available.

Medications which are *not* to be given in the ER include Lithium. Lithium is an excellent drug for the treatment of mania under controlled conditions. However, it is not indicated for use in the emergency room since it takes about 5 days to exert its anti-manic effect. Antipsychotics such as Haldol or Thorazine were used for years before Lithium became available and are quite successful in handling acute mania. Use an antipsychotic if mania is a problem.

Cogentin abuse: I just want you to be aware of it. There are some people who get a high, intoxicated effect from the use of IM Cogentin. It usually requires 5-10 mg, IM and if a patient is manipulating for an intramuscular injection of Cogentin in large amounts, be aware that this may be Cogentin abuse.

As an added note on crisis intervention, I would say "Don't lose your cool." Remember that calm objectivity can be your most important ally in a crisis situation.

Mental Status Examination

What to tell the psychiatrist on the phone: The emergency room mental status exam: The following is a mnemonic for the parts of the mental status exam and it goes like this: "*A*ll *E*ccentrics *C*ome *I*n *C*razy." (A,E,C,I,C). A is for *A*ppearance—look at the patient. See what he looks like. Is he dirty, clean, neat, sloppy, dressed bizarrely, unshaven, etc.? Is this a well-dressed, clean white lady from Pleasant Valley, or is this a dirty hobo

reeking of wine with needle tracks in his arm? Appearance can be very important in determining what his mental status is. E is for *E*motion—is the patient depressed; is he manic; does he talk calmly for a few minutes and become extremely labile and angry? Look at this face and see if it is flat and see if you can get a response from him that is more than just a monotone. Remember that the most common problem that presents to the ER as a psychiatric diagnosis is that of depressed patient. C is for *C*onversation—is the patient conversing with you in an appropriate manner? If he is loose in his associations (for example if you ask him how old he is and he answers "Grand Central Station") he may be suffering from organic brain syndrome or even schizophrenia. If you find that after a conversation with a patient *you* are confused, then relying on your own subjectivity it is quite likely that the patient is either loose in his association or manipulating you for some end. I is for *I*deation—this means "crazy" ideas. Does the patient believe that people are following him around in a red fire engine and spraying him with bug spray every time he drinks a cup of coffee? (A fellow really told me this one night in an emergency room.) A patient may also express odd words which may be "neologisms", indicating that he is schizophrenic. Ask him if he intends to kill or hurt someone else, and ask the patient if he is afraid someone is trying to hurt him. These questions will usually unloose bizarre ideas if they are present. C is for *C*ognition—this is how the patient's intellectual function is working. Does he know who he is, where he is, and today's date? Can he remember when he was born? Can he remember what he had for breakfast? Can he remember a phone number? Have him subtract serial 7's from 100. Just a few things to make sure that he is oriented and has a functioning memory should be enough to rule out severe organic brain syndrome in the emergency room setting.

There is an old saying in general medicine that the history names the disease, the physical examination confirms the diagnosis, the laboratory results are icing on the cake. It is much the same in psychiatry. The history will be the best criteria for making a diagnosis in the ER if it can be obtained.

In summary, remember that the first thing to do is to determine whether the patient is going to need commitment. If he is in need, then it is a matter of making proper arrangements to get him to the appropriate facility with a commitment order. If he is not commitable, then it is a matter of deciding what the problem is and the best way to solve it. Psychiatric patients will probably either be drug and alcohol patients, anxious patients, depressed patients, confused organic brain syndrome patients or psychotic patients. Each of these has been dealt with individually. Once again, a psychiatric emergency exists when a patient presents with a psychiatric illness and no one knows what to do. You now have an idea of what to tell a psychiatrist on the phone whether you are in your office or on the emergency ward. Finally, I remind you that it is not necessary to make a specific psychiatric diagnosis in order to adequately handle a psychiatric emergency.

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Vitrectomy, a Valuable Means for the Restoration of Vision in Blind Eyes

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INTRODUCTION

Since the introduction of closed eye pars plana vitrectomy surgery, vitrectomy techniques have evolved into what might be called "closed eye intraocular microsurgery." Vitrectomy is basically the removal of a diseased vitreous body, a previously normal transparent gelatinous material that occupies the posterior segment of the eye. Vitrectomy has become an invaluable asset to medicine and ophthalmology in the past decade for the restoration of vision in otherwise blind eyes. With the new advanced instrumentation and techniques, the surgical treatment of numerous ocular diseases has been improved, and many previously untreatable conditions have become treatable. The objectives of vitreous surgery vary according to the type of disease and, also, the particular features of each case. Therefore, the results achieved and the complications encountered vary considerably.

In this paper I will try to deal with the more common eye conditions managed by vitrectomy and its results and complications so that the patient's physician and ophthalmologist will be more aware of the benefits and hazards of vitrectomy surgery. All vitrectomies were performed either at the University of Kansas Medical Center in Kansas City or, currently, at Sparks Regional Medical Center in Fort Smith, Arkansas. The vitrectomy instrument used for all cases is the Berkley Bioengineering Ocutome instrument along with the Girard Fragmatone Unit utilizing bimanual techniques with intraocular fiberoptics for illumination and constant infusion all visualized through an operating microscope. All patients had scleral buckling performed at the end of the vitrectomy and all were administered periocular antibiotics and steroids at the conclusion of surgery.

INDICATIONS FOR SURGERY

This paper describes experience gained through 40 vitrectomies in 35 eyes of 34 patients. There are 51% males and 49% females ranging in age from 7 years to 87 years with an average of 51 years. All cases have a minimum of 6 months followup (Table I). Included are cases of persistent diabetic vitreous hemorrhage, penetrating ocular trauma, complicated retinal detachments not treatable by routine retinal surgery, endophthalmitis, old traumatic opaque pupillary membranes, vitreo-corneal touch with corneal decompensation in patients after cataract surgery, dislocated lenses whether it be the patient's normal lens or an intraocular lens implant, intraocular foreign body with vitreous opacification, anterior segment disorder such as inadequate pupil from old trauma, membranous cataract, aphakic pupillary block, vitreous incarceration with persistent cystoid macular edema. There are obviously many more indications for vitrectomy surgery, many of them important, but a complete list and discussion is beyond the scope of this paper and I will hope to deal with them in future papers.

TECHNIQUE AND EQUIPMENT

All patients were placed under general anesthesia, unless their physical status did not permit it, then a local anesthetic was utilized. All patients are cleared by their family physician prior to surgery. All patients had a B scan ultrasonography performed prior to surgery looking for intraocular foreign bodies and/or retinal detachments. The eyelashes are trimmed and a sterile prep of Betadine solution and alcohol is utilized prior to draping. The operating microscope is moved into position and the four primary rectus muscles are isolated for mobility of the eye during surgery. Then, utilizing the pars plana (an avascular zone 3 to 6 mm from the limbus), ocutome instrumentation is used in a bimanual technique to accomplish the vitrectomy. All eyes undergo scleral buckling immediately following vitrectomy to decrease the incidence of postoperative retinal detachment. All diabetic patients also receive pan retinal photocoagulation or laser treatment

TABLE I.
AGE AND SEX OF STUDY GROUP

	Men	Women
Number of Patients	17	17
Number of Eyes	17	18
Age	7 to 79	14 to 87

*Moulton Eye Clinic, 7303 Rogers Avenue, Suite 318, Fort Smith, Arkansas 72903.

two to four weeks postoperatively, if they had not undergone laser treatment prior to vitreous hemorrhage. The laser treatment helps to decrease the incidence of postoperative neovascular glaucoma, the most feared postoperative complication. All patients with any degree of cataract formation, or those patients with complicated retinal detachment that require intraocular air to help reattach the retina, had cataract removal utilizing phacofragmentation via the pars plana prior to vitrectomy. All patients remained in the hospital for an average stay of about five days prior to dismissal.

RESULTS

Preoperatively visual acuity ranged from three patients with 20/400 vision (except one patient with 20/200 vision with retinal detachment with surface retinal membranes that were causing folding of the retina that could not be repaired with routine scleral buckling), all others had a vision of counting fingers from 3″ to 2′ to light perception only. Forty percent of all patients suffered from persistent diabetic vitreous hemorrhage, 28% due to penetrating ocular trauma, 23% from complicated retinal detachments not treatable by routine scleral buckling, 6% with endophthalmitis all due to trauma, 6% with persistent pupillary membranes, 3% with vitreo-corneal touch with secondary decompensation, subarachnoid hemorrhage with bilateral vitreous hemorrhage, and intraocular foreign bodies. On the patients with subarachnoid hemorrhage their vitrectomy surgery was not performed until an average period of five to six months had lapsed following their craniotomy surgery. All were totally healthy and cleared by their neurosurgeons.

Overall improvement is 71%, 9% remain the same primarily due to retinal vascular occlusive disease not seen preoperatively due to vitreous opacification, and 20% of the patients' eyes resulted in worse vision postoperatively. 31.4% of all cases resulted in final visual acuity of 20/20 to 20/40 at least six months postoperatively, 20% with 20/50 to 20/100 vision and 14% with 20/200 to 20/400 vision. Major visual improvement was achieved in 51% of all patients. If one adds to this those eyes that retained a reasonably good vision of 20/200 or better the overall good visual success rate is 60%. This is much better than either counting fingers, hand motion, or light perception vision in otherwise blind eyes. Of the eyes that resulted in worse vision than before surgery, which consisted of 20% of all cases, three were due to diabetic neovascular glaucoma with resulting loss of vision despite laser treatment (those patients had light perception only preoperatively); one to penetrating eye trauma with retained intraocular foreign body that could not be removed during surgery due to persistent intraoperative hemorrhage within the eye; two with preoperative endophthalmitis that were not amenable to surgery and were enucleated at the time of surgery; and one with surface membrane disease which is also called massive epiretinal proliferation with secondary retinal tears, retinal folding and retinal detachment that was successfully reattached with vitrectomy and placement of intraocular air, but then redetached six weeks later. Unfortunately, the patient declined second surgery (Table II).

The diabetic population makes up 40% of this report (Table III). The patients ranged from 26 to 74 years of age. The population consists of 36% male and 64% female. Preoperative visual acuity measured from counting fingers at 1½′ to bare light perception. Postoperative vision, with at least six months follow-up, ranged from 20/30 to no light perception (Table IV), the latter were all due to the dreadful postoperative complication of neovascular glaucoma and one to retinal surface membrane disease or massive epiretinal membrane disease not correctable by repeat vitrectomy and scleral buckle. There has been an overall success rate in diabetics of 73%, 6% remain the same, and 20% worse due to neovascular glaucoma. There is a 67% success rate of major visual improvement.

COMPLICATIONS

The three most fearful complications that can and do occur are neovascular glaucoma (strictly in diabetics in this series), retinal detachment from small or large tears or from retinal dialysis resulting from insertion of blunt vitrectomy instruments through the pars plana incisions. Another rare complication is endophthalmitis, of which we have had no cases to date. Of the less common postoperative complications, but still bothersome, are non-neovascular glaucoma, which seems to be transient; corneal edema, particularly in the diabetic and generally related to intraoperative infusion time; gradual cataractous changes; postoperative recurrent vitreous cavity hemorrhage; hyphema associated with neovascular glaucoma in a diabetic; chronic uveitis; cat-

aract material left in the vitreous cavity; postoperative hypotony or low pressure in the eye; wound leak; and macular edema with resultant poor visual acuity.

DISCUSSION

Vitrectomy surgery is obviously a very valuable asset to ophthalmology when one confronts the blind eye. Vitreous surgical methods have improved markedly over the past several years. Vitrectomy surgery is a broad field of intraocular microsurgery that relies on a closed eye system and small water-tight incisions for introducing instruments through the pars plana as previously described.

The surgical methods involved in vitrectomy provide an effective means of therapy for certain

TABLE II.

Case No.	Age	Sex	Race	Eye	Number of Surgeries	Preop Vision	Postop Vision	Length of Follow-up
1	30	F	W	OD	3	LP	20/80 with CL	27 months
2	15	F	W	OD	1	LP	20/40 with CL	27 months
3	68	F	W	OD	1	CF 6″	20/50 with CL	26 months
4	69	F	W	OS	1	CF 6″	CF 1′	20 months
5	74	M	W	OD	1	CF 1′	20/50 with glasses	23 months
6	80	F	B	OS	1	LP	20/200	24 months
7	87	F	W	OS	1	LP	LP	23 months
8	78	M	W	OD	1	20/400	20/40 with glasses	22 months
9	29	M	W	OS	1	LP	Enucleated	34 months
10	48	M	W	OS	1	LP	LP	29 months
11	34	M	W	OD	1	CF 1′	NLP	28 months
12	27	F	W	OD	1	LP	20/30 with CL	32 months
13	60	F	W	OS	1	CF 6′	20/100 with glasses	30 months
14	57	M	W	OS	1	CF 6′	20/25 with CL	18 months
15	56	M	W	OS	1	HM 2′	20/20 with CL	34 months
16	69	F	W	OS	1	LP	20/400 with glasses	14 months
17	62	F	W	OD	1	CF 2′	20/30 with glasses	34 months
18	34	M	B	OD	1	LP	20/400 with glasses	34 months
19	49	F	W	OD	1	HM	20/30 with glasses	6 months
20	26	F	W	OS	2	LP	NLP	15 months
21	31	M	W	OS	1	LP	20/25 with CL	6 months
22	14	F	W	OS	1	HM	20/80 with CL	22 months
23	51	M	W	OS	1	LP	LP	13 months
24	53	M	W	OD	1	LP	CF 4′	18 months
25	86	F	W	OS	1	20/400	20/40 with glasses	15 months
26	55	M	W	OD	1	HM	20/50 with CL	15 months
27	7	M	W	OS	1	LP	20/50 with CL	6 months
28	71	M	W	OD	1	20/400	NLP	6 months
29	63	F	W	OS	1	HM	20/200	6 months
30	79	M	W	OS	2	20/200	Enucleated	7 months
31	64	M	W	OD	1	LP	Enucleated	8 months
32	64	F	W	OD	1	HM	NLP	8 months
33	28	F	W	OS	1	CF 1½′	20/100 with CL	8 months
34	30	M	B	OD	1	CF 3″	20/50 with glasses	9 months
35	65	M	W	OS	1	20/100	20/25 with glasses	13 months

LP = light perception vision
HM = hand motion vision
CF = counting fingers vision
OD = right eye
OS = left eye
CL = contact lens
NLP = no light perception

TABLE III.
DIABETIC POPULATION

	Men	Women
Number of Patients	5	9
Number of Eyes	4	10
Age	34 to 74	26 to 68

TABLE IV.
VISUAL ACUITIES POSTOPERATIVE IN DIABETIC PROLIFERATIVE RETINOPATHY WTH PERSISTENT VITREOUS HEMORRHAGE

Preop Vision	20/20 to 20/40	20/50 to 20/200	20/400 to CF	HM to LP	NLP
20/20-20/40	0	0	0	0	0
20/50-20/200	0	0	0	0	0
20/400-CF	1	4	1	0	1
HM-LP	1	2	1	2	2

CF = counting fingers
HM = hand motion
LP = light perception
NLP = no light perception

previously inoperable blinding disorders and may provide an alternative means of treatment for certain other abnormalities which have been discussed to some extent in this paper. Vitreous surgery instrumentation and operative techniques have been improved during recent years, and the basic indications for surgery and the operative principles now seem to be well established. One of the most important principles in vitrectomy surgery is reducing the operative complications. This relies on the surgeon's ability to handle the retinal complications of this type of surgery, and the experience of the surgeon with the instrumentation involved. Above all, the patient selection, and the patient's general health, whether the ocular disease is unilateral or bilateral, the preoperative evaluation, both ocular and physical, and the potential for positive visual improvement with the least degree of side effects. In all vitrectomy provides an effective means of therapy for certain previously inoperable blinding disorders and gives the blind patient some positive hope and definite chance for moderate to significant visual improvement and visual rehabilitation.

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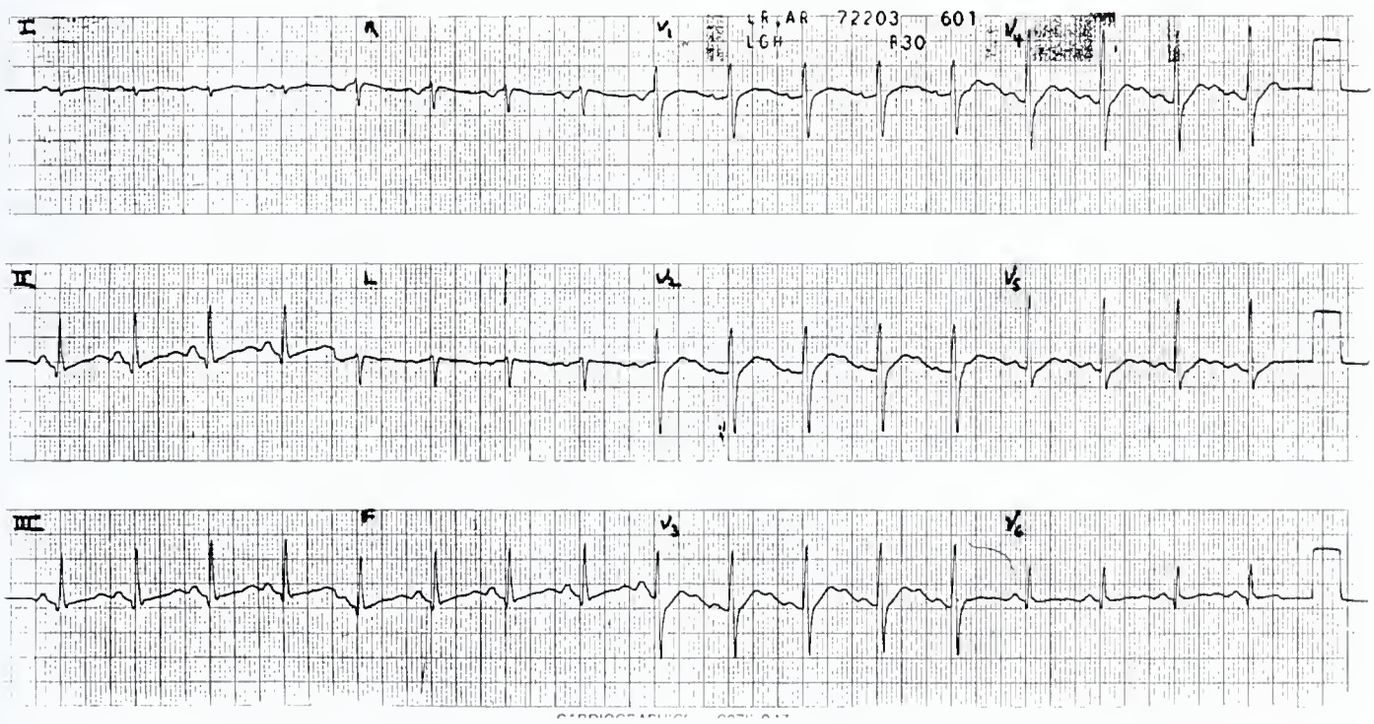
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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

See Answer on Page 305)

HISTORY: W. F. is a 53-year-old man on therapy for hypertension with furosemide. He has presented with malaise and leg cramps. Shown below is his electrocardiogram. Would you care to speculate as to the etiology of his current complaints?



John W. Watson, M.D.
Assistant Professor
Division of Cardiology
University of Arkansas for Medical Sciences
4301 West Markham
Little Rock, Arkansas 72201



EDITORIAL

Inflammation of the Pancreas

Alfred Kahn, Jr., M.D.

In the recent past the pancreas has not been the subject of any unique investigative work. Despite this, some interesting papers appear from time to time in the medical literature concerning the pancreas. One or two outstanding pieces of research on inflammation of the pancreas might arouse the interest of research laboratories, but this has not been forthcoming.

Balart and Ferrante of the Ochsner Clinic have recently written a good review entitled "Pathophysiology of Acute and Chronic Pancreatitis" (*Archives of Internal Medicine,* Vol. 142, pg. 113, January, 1982). They report that in North America, acute pancreatitis tends to be related to biliary tract disease and chronic alcohol abuse. The manner in which these disorders trigger pancreatitis is not entirely clear. They state that clinically detectable pancreatitis does not appear until several years after the commencement of heavy alcohol ingestion. Apparently the pancreas is the site of chronic damage and once injured, recurrence of pancreatitis can occur with the ingestion of small amounts of alcohol. Of interest, is the fact that they report that the excessive use of alcohol seemingly produces acute pancreatitis. The exact mode in which alcohol produces pancreatitis is a matter of debate. Some authors report that they believe that protein plugs dam up pancreatic secretions. Other reports indicate increased secretion of cholecystokinin or increased sensitivity to cholecystokinin can produce pancreatitis. The authors discuss the possibility of alcohol having a toxic affect on pancreatitis and this has been shown to be the case in some studies; the aciner cells have fat accumulation and the small organelles are injured; also it is postulated that some cells are killed-off and fibrosis occurs — this happens recurrently and eventually there is scarring of the pancreas somewhat similar to alcohol damage in the liver.

The relationship of biliary tract disease and pancreatitis seems fairly well established. An obvious cause in this instance is blockage of the ampulla Vater by a gallstone. Balart and Ferrante have reviewed the possibility of the reflux of bile or duodenal contents as being the trigger mechanism in pancreatitis. The theory being that the chemical substances in the duodenal contents or bile could get in the pancreatic duct retrogradely and initiate enzymatic action; in experimental animals, ligation of the pancreatic duct seems to prevent this type of pancreatitis — and it is of further interest that bacteria do not seem to play an essential role in pancreatitis. One point of speculation here is that sphincterectomy of the ampulla of Vater, which would theoretically alter the reflux of duodenal contents in the common duct, does not promate pancreatitis; this seems anomalous. Other triggering mechanisms which have been suspected include bacteria which injure the mucous membrane of the pancreatic duct and chemicals in bile which injure the pancreatic duct. In pancreatitis, autodigestion occurs and it has been felt that this was due to the activation of pancreatic enzymes. Trypsin, for example, can cause outpouring of edema fluid in pancreatitis by altering the permeability of the blood vessels. Trypsin can also directly damage pancreatic cells. Trypsin is held in check, so-to-speak, by pancreatic Trypsin inhibitors. Probably when Trypsin is activated it starts a cascade of other destructive enzymes stored in the pancreas which damage the host pancreas; for example, elastase damage the blood vessel walls; phospholipase A injures the phospholipid of cell walls, etc. Balart and Ferrante discuss the local extention of the inflammation reaction which occurs with pancreatitis; the toxic products released in pancreatitis are said to increase the portal pressure and to decrease

the systemic arterial pressure; these same toxic substances injure hemoglobin. Lymph flow is said to slow during pancreatitis.

Many distant organs are affected when there is acute pancreatitis; the lungs may be damaged from a mild to a severe degree. This is said to be due to mechanical factors including abdominal distention as well as chemical factors as phospholipase A acting on the cell of the lungs. The kidneys are injured in pancreatitis by interfering with tubular re-absorption of amylase. The blood coaggulates improperly in pancreatit's. The blood calcium tends to decrease in pancreatitis. Blood lipids tend to increase in pancreatitis. Of considerable importance is that a confusional state often develops in pancreatitis.

The treatment of acute pancreatitis has not been very satisfactory. Various medical programs have been tried without much benefit as antisecretory drugs become available as therapy in cases of acute pancreatitis. One of the more recent clinical trials has been reported by Broe, Zinner, and Cameron, "A Clinical Trial of Cimetidine in Acute Pancreatitis" (*Surgery Gynecology and Obstetrics,* Vol. 154, pg. 13, January, 1982). These authors studied 116 patients with pancreatitis; they all had serum amylase of 160 Caraway units or more. Ninety-eight patients had pancreatitis associated with alcoholism, 14 had pancreatitis associated with biliary tract disease. In four patients the cause of the pancreatitis was unknown. They gave Cimetidine in addition to basic therapy to 52 patients and they gave only the basic therapeutic program without Cimetidine to 64 patients. The authors report that Cimetidine seemed to be absolutely no benefit in the treatment of pancreatitis. Furthermore, Broe, *et al,* stated that other investigators using Trasylol and glucagon have not been able to prove that these drugs were beneficial in pancreatitis. It would appear from the studies of Broe, Zinner, and Cameron that there is no very good medical antidote for pancreatitis.

Philip Wolfson has written a collective review in *Surgery Gynecology and Obstetrics* on "Surgical Management of Inflammatory Disorders of the Pancreas" (Vol. 151, pg. 689, November, 1980). This is a very comprehensive review of the medical literature and has a bibliography of 76 authors. Wolfson reports that in acute pancreatitis it is difficult to decide whether to operate or not; some cases of acute pancreatitis are obscure and there is general agreement that these cases may require Laparotomy for diagnosis. Al Wolfson points out, acute pancreatitis varies from a marked edematous disease which needs no treatment if it is discovered at Laparotomy to a fulminating disease in which some type of procedure may be desirable. Non-surgical therapy is recommended, if it works — nasogastric suction, intravenous fluid, and supportive therapy.

Wolfson reports that drainage of the lesser peritoneal sac is often helpful in pancreatitis; the enzymes and necrotic wastes of the pancreas collect in the lesser sac and may be absorbed, resulting in distal damage; as these substances are evacuated there appears to be benefit manifested by improved survival rate.

Along the same line, the author states that Laparotomy of the lesser peritoneal sac may be beneficial and has been reported by various authors — other procedures which have been tried in pancreatitis are gastrostomy, jejunostomy, and cholecystostomy. Apparently there is no agreement as to the value of these procedures. Some authors are reported to feel a pancreatectomy is needed in certain cases of acute pancreatitis — septic and hemorrhagic complications are shattering to the patient, but the patients may be so ill that surgery itself presents great risks. The author states that debridement of the pancreas has been tried with variable success. Wolfson reports that pancreatitis secondary to biliary tract disease can be cured in about 90% of the cases by biliary tract surgery. Prolonged delay in performing biliary surgery may expose the patient to successive attacks of pancreatitis. The author warns about the presence of pseudocyst in patients with acute pancreatitis having a prolonged course or if a mass becomes palpable; these cysts are said to resolve without surgery at times. In other cases they cause obstructive symptoms or bleeding and as a result require excision. Cysts which cannot be excised may be drained into a nearby viscus. Percutaneous drainage of the cyst is now being performed but decisions to its value have not yet been reached. The rupture of a cyst, whether by surgical removal or spontaneously occurring may require immediate surgery. Pancreatic abscesses occur in 1.5-4.0% of the patients with acute pancreatitis, according to Wolfson. He states that it is usually a relatively late event in the course of pancreatitis; external drainage is required.

Pancreatitis ascites is also reported in the article. It is said to have its source in leaking pancreatic ducts or leaking pseudocysts. Enzymes apparently play a role. Chronic pancreatitis, which is the end result of recurrent episodes of paucreatitis is always characterized by permanent damage to the pancreas. Pain is a hallmark factor — as well as frequent metabolic disturbances. The pain has been attributed to distention of the pancreatic duct and to persistent inflammation involving the ducts and nerve endings. Four types of surgery are used in chronic pancreatitis: severing the nerves of the pancreas; operating on the sphincter Oddi; drainage of the distended duct; and resecting of portions of the diseased pancreas. He states that there is no ideal surgical procedure and some cases respond better to some types of operations and others to another type of procedure.

Of particular interest at the present is the study of the pancreas by serial endoscopic pancreatography. This is reported on by Nagata, Homma, Tamai, Ueno, Shimakura, Oguchi, Furuta, and Oda in *Gastroenterology* (Vol. 81, pg. 884, November, 1981) in an article entitled "A Study of Chronic Pancreatitis by Serial Endoscopic Pancreatography." This group of Japanese investigators repeatedly examined pancreatic duct systems by retrograde pancreatography in 31 patients with chronic pancreatitis, 32 patients with suspected pancreatitis and 16 control cases. Their article contains some very nice diagrams of pancreatic ducts. In their control group the serial pancreatograms remained fairly normal. They report that chronic alcohol pancreatitis seemed to be different from other types of pancreatitis. The pancreatography showed continuing changes even if the patients stopped using alcohol. They suggest that when the duct system is injured by alcohol the damage will continue regardless as to whether more alcohol is ingested or not. The cases of alcoholic pancreatitis showed both areas of stenosis and dilitation. The cases of non-alcoholic pancreatitis showed virtually no change.

Pancreatitis is still something of an enigmatic disease. The distant cause of pancreatitis is known but the intermediary steps producing the disease is somewhat obscure. There is no uniform method of treatment — but in general, it is wise to avoid surgery in pancreatitis unless there is a pressing need to do so.

"From Other Years"*

Journal of the Arkansas Medical Society
Vol. 3 No. 10 April 15, 1893 p. 449-50

EDITORIAL NOTES.

Dr. W. B. Welch, the first President of the State Medical Society, has written a letter to the Secretary, in which he stated that he had retired from the practice of medicine and never expected to attend the Society again.

"Should auld acquaintance be forgot
And never brought to min'?
Should auld acquaintance be forgot,
And days o' lang syne."

A sensible mayor is Col. M. G. Hall, recently elected the chief magistrate of Little Rock. When a house is taken charge of by new occupants the first thing done is generally to put the dwelling in first-class order, and have a general cleaning up. When Mayor Hall came to occupy the office of mayor of the City of Roses, he set an example that ought to be followed by every mayor in the State. His very short inaugural address was mostly composed of the following sensible recommendations:

"There is much to be done by the incoming administration in the way of stimulating and encouraging public improvements, so happily begun and successfully prosecuted by the Whipple administration. To these matters I can only refer tonight, but will call your attention to them in detail in the future.

"There is one matter of supreme importance, in my judgment, which should have your prompt attention, and that is the sanitary condition of the city. Summer will soon be here, and we will in all probability be threatened with the cholera and other contagious diseases. We should prepare now to protect our people from the plague; not wait until the dreaded monster is knocking at our doors or has a foothold within our borders. The city should be thoroughly cleaned and kept

*From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives.

clean. All persons living on the line of the sewers should be forced to connect with the mains, and to remove or thoroughly disinfect the surface closets now in use.

"It will take several weeks to do this work, and I hope you will, without unnecesary delay, set about devising ways and means to accomplish it."

At a meeting of the Joint Committee of the Chicago Medical Profession on World's Fair Entertainment, held at the Sherman House, November, '92, the establishment of a Bureau of Information and Service was delegated with approval and endorsement to Charles Truax, Green & Co., the committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the Exposition as may seem desirable.

This action was confirmed at the final meeting of the Joint Committee, February 25, '93, and on application of the Practitioner's Club and the South Side Medical Club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies, with the retention of the chairman and its American and foreign secretaries already appointed.

Chairman—Dr. Charles Warrington Earle.

American Secretaries—Dr. Archibald Church, Dr. George Henry Cleveland, Dr. John C. Cook, Dr. J. C. Culbertson.

British—Dr. Sanger Brown.

German—Dr. F. C. Hotz.

French—Dr. Fernand Henrotin.

Spanish—Dr. E. J. Gardiner.

Italian—Dr. A. Lagario.

Sweedish—Dr. K. Sandberg.

Canadian—Dr. R. D. McArthur.

Russian—

The scope and duties of the above secretaries will be designated in the future.

Dr. L. S. Pilcher says that New York State has 10,000 doctors, 8000 of whom practice rational medicine, 1300 homeopathic, 300 botanic medicine, and the rest a variety of theories.

Sir Richard Owen, the celebrated anatomist and naturalist, died in London December 9, aged 88 years.

MEDICINE IN THE NEWS



THE MONTH IN WASHINGTON

The "lame duck" session of Congress starting Nov. 29 will feature action on legislation to exempt the professions from Federal Trade Commission jurisdiction and on most of the major appropriations bills, including funding for the Health and Human Services Department.

Other major health issues to be resolved when Congress returns iuclude authorizations for the National Institutes of Health and extension of the health planning program.

The FTC showdown was postponed for a number of reasons, including the need for a continuing resolution to keep the federal government operating for the first two months of the fiscal year that began Oct. 1. The resolution was necessary because Congress had approved only two of the 13 big money bills for the current fiscal year. The failure to act more swiftly on the appropriations front was the reason for the extra, or lame duck session that was forced by President Reagan.

Before hitting the campaign trail for the general elections, the House rejected the Administration's proposal for a constitutional amendment requiring a balanced budget. The vote was far short of the necessary two-thirds margin of approval.

Among other hurried votes, the Senate adopted 70 to 29 a non-binding resolution opposing any "means" test for Medicare patients, knocking

down a trial balloon floated by the Administration as officials tried to figure out ways to pare Medicare costs next fiscal year.

Congress did approve legislation encouraging states to pass strict laws against drunk driving by giving them more highway funds.

The House approved an authorization to give the National Institutes of Health 11 percent more money this fiscal year and to add a new Institute of Arthritis. The Senate must still act.

The controversial health planning program won a lease on life by House adoption of a bill keeping the program going for two years, but cutting funding to a total of $65 million and restricting federal funding for certificate-of-need to institutions involved with $1 million or more of new projects. The Senate has not voted on this issue.

* * * *

Congress' early October decision to adjourn and postpone until at least the end of November the showdown vote on exemption of the professions from the Federal Trade Commission has given both sides in the controversy time to bolster their drives for votes.

The climate in the lame duck session of Congress will be more relaxed. Lawmakers will be under less political pressure with the elections well behind them. The "lame ducks" — Senators and Representatives defeated in the general election — will be under no pressure at all.

The postponement was in part due to the belief by Congressional leaders that the issue is a political hot potato that the lawmakers would rather not handle until the elections are over.

Since the timing of the House vote was in the hands of the Democratic leadership — which is generally opposed to the anti-FTC drive led by the American Medical Association — there was reason to speculate that the leadership was not confident its forces could prevail in a vote by the full House.

The Senate Republican leadership promised to take up the measure in the "lame duck" session after the Senate Appropriations Committee had approved 13-5 an amendment that would prohibit the FTC from using appropriated funds to take actions against state-regulated professions such as physicians. The amendment was part of a continuing appropriations resolution that finally cleared Congress. Amendment sponsor Sen. James McClure (R-ID) agreed not to press for a Senate vote when assured by leadership the question will be resolved in the special session.

The Senate Commerce Committee earlier this year approved a re-authorization bill for the FTC that included an amendment by Sen. Ted Stevens (R-AK) to exempt the professions. This measure is still pending before the Senate, delayed in part because of the opposition of Committee Chairman Robert Packwood (R-OR) to the Stevens Amendment, which was adopted by a 10-5 committee vote.

The situation in the House originally was for a vote Oct. 1 on a bill re-authorizing the FTC for another year. As approved by the House Commerce Committee, the bill contained no restrictive language on the FTC's jurisdiction, but opponents of the FTC's control over the professions were promised a floor vote on the bill by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) for a moratorium on FTC's actions against the professions. A slight majority of the House — 220 members — has endorsed the Luken-Lee bill.

A strong argument against the FTC's jurisdiction over the professions was registered from a surprise quarter — the Attorney General of North Carolina, Rulus Edmisten. The Association of State Attorneys General had voted to support the FTC, but Edmisten told Congress that "without the Luken-Lee Amendment the FTC will have the authority to pre-empt state laws and regulations, an authority which I have opposed repeatedly."

Edmisten noted in a letter to Rep. L. H. Fountain (D-NC) that in 1978 he joined with the attorneys general of 16 other states to challenge "the FTC's attempt to pre-empt state laws relating to advertising of ophthalmic goods.

"In essence, our argument was that the FTC does not have authority to pre-empt state statutes. This is a principle of tremendous importance. The (Appeals) Court remanded the case, with its opinion supporting the position of the attorneys general."

Edmisten said FTC actions "have undermined what is a traditional state regulatory authority and have discouraged these groups from many self-regulatory activities." The professions, he noted, "have a long and impressive record of self-regulation in the public interest." Edmisten pointed out that the Justice Department and the states would retain their anti-trust authorities over the professions.

The attorney general said the substitute plan offered by Rep. James Broyhill (R-NC) "is the antithesis to Luken-Lee and would clearly give the FTC new authority. I urge Congress not to grant the FTC power to pre-empt state laws."

In the ophthalmic case, Federal Appeals Court Judge Carl McGowan wrote that the FTC in issuing regulations "has at least approached the outer boundaries of its authority and may have infringed" on states rights to regulate activities.

Meantime, the Administration formally supported the Broyhill Amendment. Vice President George Bush wrote Broyhill a letter to "reaffirm and reemphasize the Administration's support . . ."

* * * *

Blue Cross and Blue Shield Association in a major expansion of its Medical Necessity Program has provided its member plans with guidelines to eliminate unnecessary use of respiratory care.

About 25 percent of all hospital inpatients receive respiratory therapy, one of the fastest growing components of hospital care, with cost estimated as high as $4 billion a year. In making the announcement, the Association said implementation of the guidelines could save hundreds of millions of dollars annually in respiratory therapy costs.

The guidelines, which were approved by the Association's Board of Directors, also have the endorsement of several national medical organizations within their specialty areas. These are the American College of Physicians (ACP), the American College of Surgeons (ACS), and the American Academy of Pediatrics (AAP).

The guidelines establish definitive criteria for respiratory therapies to help assure quality patient care by ascertaining that the correct procedure is used on the right patient at the proper time.

Procedures covered by the guidelines — all of which can be an effective part of patient care — include intermittent positive-pressure breathing (IPPB), limited and complete pulmonary function tests (PFTs), incentive spirometry, postural drainage, aerosol therapy, arterial blood gas analysis, and oxygen therapy, according to the Blue Cross-Blue Shield Association.

"The respiratory therapy guidelines are intended to raise the level of cost-consciousness of our subscribers, physicians and hospitals," said Bernard R. Tresnowski, President of the Association, the coordinating agency for the nation's 103 Blue Cross and Blue Shield Plans.

"Any effort which helps control costs without lowering the quality of care will benefit everyone."

Tresnowski emphasized that the Medical Necessity Program, which previously dealt with outmoded or unproven procedures and tests as well as routine hospital admission batteries, does not mean a reduction in benefits or immediate denial of claims for subscribers. Rather, he said, "Plans will watch patterns of utilization on a hospital-by-hospital basis, and seek changes in these patterns where necessary."

The program is designed, he added, to assure that care received by patients is not only the best available but also the most cost effective.

Commenting on the program, William Y. Rial, M.D., AMA President, said the Association has reviewed a preliminary version of the guidelines on respiratory therapy and has found them to be useful and reliable recommendations.

The new guidelines spell out specific circumstances when use of the various respiratory procedures is appropriate or should be limited. They also identify circumstances when payment for routine use will be limited in the absence of special justification.

For example, many patients routinely undergo pre-operative pulmonary screening, which includes a complete battery of pulmonary function tests, for possible pulmonary disease without regard for either symptoms or history. Under the guidelines, Plans are advised not to pay for PFTs unless the patient has a known pulmonary problem, has a history of smoking or an occupational history which might suggest the possibility of lung disease, or unless other special circumstances are identified.

When oxygen therapy is prescribed, documentation of need would be required after certain prescribed time periods of usage for continuation of the therapy in acute myocardial infarctions or other medical emergency situations such as acute pneumonia, pulmonary embolisms, heart failure, drug overdoses or hepatic failure.

Work to develop the new guidelines included a 1981 conference sponsored by the Blue Cross and Blue Shield Association to solicit professional opinion on the medical efficacy and cost-effectiveness of the several respiratory therapies. The one-day conference was attended by representatives of

numerous national medical specialty and institutional organizations, who addressed both diagnostic and therapeutic procedures.

* * * *

A landmark public health endeavor providing physicians with drug information instructions for patients was launched this month by the American Medical Association.

At a Washington, D. C., news conference announcing the Patient Medication Instructions (PMIs) program, Arthur Hull Hayes, M.D., Commissioner of the Food and Drug Administration, said the AMA initiative will give patients across the nation information on drugs "from impeccable sources" with data "that can be relied upon." Dr. Hayes described the program as "terribly important, terribly exciting," and "well thought out."

The PMIs are 5½" by 8½" sheets printed on both sides with instructions in clear, simple language detailing the purpose of the drug, how it is to be taken, and its possible side effects. Space is provided to write in the dosage and any special instructions the physician may have for the individual patient. PMIs for individual drugs or drug classes are bound in pads of 100 sheets. They will be updated periodically.

Available now are PMIs for 20 of the most widely prescribed drugs or drug classes. Physicians may obtain them from the AMA for a nominal charge that covers shipping and handling costs. Eventually the program will provide PMIs for as many as 100 drugs or drug classes that will represent the vast majority of all prescriptions written.

Participating with the AMA in the PMI program are the United States Pharmacopeial Convention, Inc., and the American Pharmaceutical Association.

James Sammons, M.D., Executive Vice President of the AMA, told reporters PMI is "among the most important programs the AMA has ever initiated." Dr. Sammons said the benefits to patients and physicians "will be very significant."

Joseph Boyle, M.D., Chairman of the AMA Board of Trustees, said "we believe the program will help physicians and better the health of the patients we serve."

Dr. Sammons said the AMA strongly believes that patients need information about drugs prescribed for them. "And we believe just as strongly that it is the proper and vital role of the practicing physician to provide this information."

He noted that at one time the FDA was planning a mandatory program of package inserts for all prescription drugs, "but it is now encouraging support for the voluntary PMI program."

The PMI program is sponsored by the AMA Education and Research Foundation, which is seeking a broad base of financial support, including pharmaceutical firms. Contributions have passed the $1.8 million level, including $900,000 from the AMA.

William Apple, Ph.D., President of the APhA, commended the AMA for the program which he said is "a cost-effective means for providing needed drug therapy-related information to patients."

"This is another landmark contribution to the public health and welfare that the medical and pharmacy professions have been able to accomplish through cooperative effort," said Apple.

William Heller, Ph.D., Executive Director of the United States Pharmacopeial Convention, said the AMA program is "a breakthrough effort" in the development of an economical and effective system of getting the information to the patient, getting the patient to read it, and to act on it. He said the USP "is pleased to provide its computerized patient drug use information as the basis for the PMIs."

Companies that have provided financial support for PMI so far include: Bristol-Myers Co.; Mead Johnson Foundation; Hoechst-Roussel Pharmaceuticals, Inc.; Hoffman-La Roche, Inc.; Johnson and Johnson; Eli Lilly and Co.; Revlon, Inc.; Upjohn Co.; Warner Lambert; American Home Products Corp.; Smith Kline and French Laboratories; Burroughs Wellcome; Organon Diagnostics and Pharmaceuticals, and G. D. Searle.

The AMA is drawing not only upon its own publication, *AMA Drug Evaluations,* but also on sources such as the *United States Pharmacopeia* for information. The United States Pharmacopeial Convention, Inc., is an independent, nonprofit corporation that sets official standards of purity, strength and quality for drugs.

* * * *

The Administration is considering a specific treatment grouping scheme as the basis for the prospective reimbursement plan for Medicare.

The plan to reimburse hospitals by rates set in advance drew immediate criticism from the American Hospital Association (AHA) as "exactly

the wrong way to go." Congress would have to approve the plan.

The "diagnostic related groups" idea would set advance rates that hospitals would receive for 467 diseases or conditions. Treatment of a Medicare patient with ulcers, for example, would net a hospital a pre-determined sum, adjusted for different types of hospitals and regional variations.

Congress this year ordered the Administration to recommend a detailed prospective reimbursement plan designed to encourage hospitals to economize.

Health and Human Services (HHS) Secretary Richard Schweiker talked about present Administration thinking on the subject at a get-together with a few reporters. Later, he met with officials of major interested organizations, including James Sammons, M.D., AMA Executive, and J. Alexander McMahon, AHA President.

The input of the interested organizations will be considered by the Administration before it makes its final decisions on prospective reimbursement.

However, Schweiker made clear the diagnosis related groups (DRG) method of payment is at the center of present HHS Department plans.

Hospitals have accepted the concept of prospective reimbursement but there are wide differences about how the plan should work. McMahon told reporters DRGs are valuable for analyzing use of services, but under the Schweiker proposal "they are being twisted for use in a payment mechanism and that is exactly the wrong way to go."

Another AHA spokesman said DRGs are unsatisfactory in grouping patients with complications and do not take into account intensity of treatment.

The extent of the Administration's commitment to DRGs was shown by recent publication of regulations providing that federal support for state reimbursement experiments with Medicare would be limited to plans involving DRGs.

An AHA proposal earlier this year would have based reimbursement on average costs per discharged patient. The health insurance companies have proposed a cost-containment plan that would place a set limit on Medicare reimbursement increases for hospitals.

Prospective reimbursement is just one of a host of Medicare-Medicaid economy moves the Administration will ask the next Congress to approve. The issue is expected to stir controversy and heated debate among the lawmakers.

* * * *

RESOLUTIONS



DR. RICHARD M. LOGUE

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of our esteemed colleague, Richard M. Logue, M.D., and

WHEREAS, he had been an active member of this Society for more than thirty years, giving generously of his time and ability to the betterment of the organization, and

WHEREAS, he was greatly respected by his fellow physicians for his professional ability and for his unselfish devotion to providing medical care to his patients in his community as well as for his charitable works in foreign fields.

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and made a part of the permanent records of the Society, and

THAT, a copy be forwarded to Dr. Logue's family as an expression of our deep and heartfelt sympathy, and

THAT, a copy be forwarded to the Journal of the Arkansas Medical Society for publication.

ADOPTED: Executive Committee
Pulaski County Medical Society
November 17, 1982

by order of the Memorials Committee
H. Elvin Shuffield, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

DYNAMICS OF HUMAN SELF-DESTRUCTIVE BEHAVIOR

Presented by Vann Arthur Smith, M.D., Ph.D., Director, Midwest Suicide Information Association, Libertyville, Illinois, *February 15, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

DRUG INTERACTION/OLD AND YOUNG

Presented by the Department of Medical Education, Baptist Medical Center, *February 19, 8:00 a.m. to 12:30 p.m.,* BMC Auditorium, Little Rock. Four hours Category I credit. Registration fee: $40.

ACUTE LEUKEMIA WITH MARROW TRANSPLANT AND PERIPHERAL VASCULAR DISEASE

Presented by staff from Baylor University, *February 24, 4:00 p.m. to 9:00 p.m.,* Holiday Inn, I-30 and State Line, Texarkana. Sponsored by UAMS. Four hours Category I credit. Registration fee: $15.

SLEEP DISORDERS

Presented by Edgar Lucas, Ph.D., *February 24-25, 8:00 a.m. to 5:00 p.m.,* Excelsior Hotel, Little Rock. Sponsored by UAMS and Southern Sleep Society. Fourteen hours Category I credit. Registration fee: $50.

PRACTICAL MANAGEMENT OF RHEUMATIC DISORDERS

Presented by Eleanor Lipsmeyer, M.D., and Fred Robertson, M.D., *March 3-5, 8:00 a.m. to 12:00 noon each day,* Arlington Hotel, Hot Springs. Sponsored by UAMS. Twelve hours Category I credit. Registration fee: $75.

PSYCHIATRY FOR THE FAMILY PRACTITIONER

Presented by Ben Saltzman, M.D., *March 19, 8:00 a.m. to 5:00 p.m.,* UAMS Ed II Auditorium. Seven hours Category I credit. Registration fee: $50.

ANNUAL SURGICAL SYMPOSIUM

Presented by Gilbert S. Campbell, M.D., *March 25-26, 8:00 a.m. to 12:00 noon,* Arlington Hotel, Hot Springs. Sponsored by UAMS and Arkansas Chapter, American College of Surgeons. Six hours Category I credit. Registration fee: $25.

COMPLICATIONS OF UREMIA

Presented by Watson Arnold, M.D., *March 25-26, 8:00 a.m. to 12:00 noon,* Arlington Hotel, Hot Springs. Sponsored by UAMS. Eight hours Category I credit. Registration fee: $50.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, fourth Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conferences, first and second Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, third and fourth Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, first and third Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, February: Charles Hiller, M.D., Pulmonary; March: Robert Bradsher, M.D., Infectious Diseases.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Craighead Memorial Hospital Cafeteria.
Monthly Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, 3-South Playroom.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, second and fourth Wednesday, 8:15 a.m., Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category 1 credit.
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
General Internal Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #3.
Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., St. Vincent Infirmary in February; in conjunction with Little Rock Gynecological Society meeting in March.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S-1169 Laboratory.
Nephrology Conference, third Wednesday, 7:30 a.m. to 8:30 a.m., Cafeteria Dining Room D.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S-1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA — AHEC-Southwest

AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The potient hos o sinus rhythm ot o rote of 100/minute. The QT intervol is prolonged. A prominent U-wove is noted in both the limb ond chest leods which seems to "override" the T-wove. These findings ore compatible with hypokalemio. Indeed, this potient's serum potassium proved to be 2.7 mEq per liter. Both the ECG changes ond his complaints resolved with potossium repletian.



PERSONAL AND NEWS ITEMS

CVA WORKSHOP

Drs. James Weedman and Moises Menendez of El Dorado were speakers at a Cardiovascular Arrest Workshop coordinated by Warner Brown Hospital. Dr. Weedman spoke on the overview of stroke and Dr. Menendez spoke on diagnosis and therapy of transient ischemic attack.

DR. LIONG LOCATES

Dr. Richard Liong has joined Dr. Troy Raney for the practice of General Medicine in Cave City.

DR. GOLLADAY SPEAKS

Dr. E. Steve Golladay of Little Rock presented "Surgical Emergencies of Childhood" at the November Baxter General Hospital Regional CME program.

DR. YALAMANCHILI DIRECTOR

Dr. R. R. Yalamanchili of Pine Bluff has been named director of the Area Health Education Center at Pine Bluff.

FAMILY PRACTICE DIPLOMATES

Dr. Stephen C. Golden of Jonesboro has been named a diplomate of the American Board of Family Practice. Dr. L. R. Darden of Van Buren has been recertified as a diplomate of the Board.

PHYSICIANS HONORED

Dr. and Mrs. Roy W. Gerritsen of Forrest City held a wine and cheese reception in honor of three new doctors in Forrest City — Drs. Lawrence Barker, James P. DeRossitt, III, and Curt Patton.

DOCTORS HONORED

The Little Rock Rotary Club celebrated Rotary Foundation Day in November with an awards dinner at the Excelsior Hotel. Two Little Rock physicians, Dr. Ted Bailey and Dr. James Pappas, received Paul Harris Fellowship Awards. The awards signify that contributions have been made to the International Rotary Foundation in their names and scholarships will be awarded by the Rotary Foundation to deserving college students for study abroad. The award is one of the Rotary's highest; Drs. Bailey and Pappas were the only physicians honored by the Club this year. Both physicians are Rotarians.

ALLERGY CLINIC OFFICE

The Arkansas Allergy Clinic of Little Rock has opened a second office at 2500 McCain Boulevard in North Little Rock.

DR. BECKMAN EXPANDS PRACTICE

Dr. Jim Beckman has opened an office at 3000 West Market in Fayetteville for the practice of Plastic, Reconstructive and Hand Surgery. He will also continue practicing in Mountain Home.

DR. BLUE APPOINTED

Dr. Glen Blue of Searcy has been appointed liaison associate of the Commission on Cancer Program at White County Memorial Hospital and Central Arkansas General Hospital.

DR. BUTTS SPEAKS

Dr. Donald Butts of Harrison spoke at a recent meeting of the Harrison High School Medical Research Science Club.

DR. HOBBY RECERTIFIED

Dr. George Hobby of Paragould has been recertified as a diplomate of the American Board of Family Practice.

DR. SMITH HONORED

Dr. John McCollough Smith of Little Rock has been honored by the National Interscholastic Athletic Administrators Association with a Distinguished Service Award for 1982.

DR. FERRIS INDUCTED

Dr. Ernest J. Ferris of Little Rock was inducted as a Fellow of the American College of Chest Physicians at the recent meeting of the ACCP.

DR. THOMAS

Dr. Bill Thomas of Benton spoke to fifth grade science students at a local school on the workings of the heart.

DR. TEXTER SPEAKS

Dr. E. Clinton Texter, Jr., of Little Rock, spoke on "Antibiotic Associated Colitis" during the Samuel Kountz Lecture Series at the University of Arkansas at Pine Bluff.

DR. STONESIFER IN AFRICA

Dr. Larry D. Stonesifer of Little Rock presented a paper at the Eleventh Congress of the International Diabetes Federation in Nairobi, Kenya, Africa.

DR. ROSENFELD LOCATES

Dr. Michael Ro enfeld, an Internist, has moved to Buffalo Island (near Manila) for the practice of medicine.

DR. SMITH PRESIDENT

Dr. David Smith of Little Rock has been elected president of the Harding University Alumni Association.

DR. CITTY SPEAKS

Dr. Jim Citty of Searcy spoke on social ills at a meeting of the Searcy Optimist Club.



NEW MEMBERS

DR. WALTER M. MOORE

Dr. Moore is a new member of the Polk County Medical Society. His office address is 54 Oaklawn Drive, Mena.

Dr. Moore was born in Beggs, Oklahoma, and was graduated from Oklahoma Baptist University at Shawnee in 1940 with a Bachelor of Science degree. He attended Baylor University in Waco during the latter part of 1941 and early 1942. Dr. Moore entered the United States Army in 1943 and served until November 1949. He was graduated from the University of Oklahoma College of Medicine in 1945. His internship was at Missouri Baptist Hospital in St. Louis. During his military service, he was stationed at Santa Fe, San Antonio, El Paso, and New Orleans.

Following his military service, Dr. Moore went to Southern Baptist Hospital in New Orleans for residency training.

He was school physician at the New Orleans Baptist Theological Seminary from 1950-51, civil service physician at Camp Leroy Johnson in Louisiana from 1951-52, missionary physician in Nigeria from 1952 to 1960 and continued practice in Nigeria until 1967. He returned to the United States in 1967 for private practice in Okemah, Oklahoma. Dr. Moore served with the Oklahoma State Health Department from 1968 to 1970. He was medical director of the County Health Department of Norman and Muskogee from 1970 to 1972. From 1973 to 1982 he was with the Baptist Medical Centre at Nalerigo, Ghana.

Dr. Moore received a Master of Science degree in Public Health from Tulane University in 1956 and a Doctor of Public Health Degree from the University of Oklahoma in 1973.

While in Oklahoma in the early 1970's, he served as Assistant Community Health Director for the State and Head of Home Health Care for the State. He was Public Health Director 1979-82.

* * * *

The Craighead-Poinsett County Medical Society has three new members:

DR. STEVEN M. BLANCHARD

Dr. Blanchard, a native of Pleasanton, California, received his B.S. degree from Arkansas State University in 1975. He is a 1979 graduate of the University of Arkansas College of Medicine. His internship and Family Practice residency were with the University Hospital.

Dr. Blanchard specializes in Family Practice. He is associated with the Family Clinic, 110 East Jackson, in Jonesboro.

DR. STEPHEN C. GOLDEN

Dr. Golden was born in Piggott. He was graduated from Arkansas State University in 1975 and the University of Arkansas College of Medicine in 1979. His Family Practice training was with the Area Health Education Center in Fort Smith.

Dr. Golden is a board certified Family Physician. He is associated with the Family Clinic at 410 East Jackson in Jonesboro.

DR. STEPHEN O. WOODRUFF

Dr. Woodruff, an Internist, is practicing in Jonesboro. His office is located at 311 East Matthews.

Dr. Woodruff was born in Stillwater, Oklahoma. He is a 1972 graduate of Arkansas State University and a 1976 graduate of the University of Arkansas College of Medicine. His Straight Medicine internship and Internal Medicine residency were at the University Hospital.

From 1979 to 1982, Dr. Woodruff served with the United States Navy at Naval Aerospace Regional Medical Center in Pensacola, Florida. He was a member of the teaching staff for Family Practice Residents.

Dr. Woodruff is certified by the American Board of Internal Medicine.

* * * *

DR. H. JOE HOWE

Dr. Howe is a new member of the Garland County Medical Society. He is a native of Hot Springs.

Dr. Howe is a 1970 graduate of Hendrix College at Conway and a 1974 graduate of the University of Arkansas College of Medicine. His internship was with the University of Minnesota and his residency training was with the University of Arkansas. Dr. Howe served a fellowship at M. D. Anderson Hospital and Tumor Institute in Houston. He is a board certified surgeon.

Dr. Howe specializes in Surgery. He is associated with the Burton-Eisele Clinic at 101 Whittington Avenue in Hot Springs.

The Pulaski County Medical Society has added the following physicians to its membership roll:

DR. RICHARD L. HAYES

Dr. Hayes is a native of Little Rock. He received a B.A. degree in 1973 from Hendrix College at Conway, an M.S. degree in 1975 from the University of Central Arkansas and his medical degree in 1979 from the University of Arkansas College of Medicine.

Dr. Hayes served his Family Practice residency at the University of Tennessee Affiliated Hospitals in Jackson.

Dr. Hayes specializes in Family Practice. His office is located at #2 Crestview Plaza in Jacksonville.

DR. DIANE G. LEPORE

Dr. Lepore was born in Brooklyn, New York. In 1966, she was granted a B.A. degree by Hunter College in New York. Dr. Lepore was graduated from the University of Rome School of Medicine in Italy in 1974.

After a rotating internship with the Cabrini Health Care Center in New York, Dr. Lepore held a Physical Medicine and Rehabilitation residency at the Institute of Rehabilitation Medicine in New York.

From January 1980 to August 1981, Dr. Lepore practiced in Milan, Italy, and Vigevano, Italy.

Dr. Lepore specializes in Physiatry. Her office is located in Suite 515 of the Medical Arts Building in Little Rock.



THINGS TO COME



The Southern Medical Association has announced the following seminar schedule for 1983:

MEDICAL STAFF LEADERSHIP SEMINARS. March 18-20, Longboat Key Club, Sarasota, Florida. April 22-24, Marriott Hilton Head Resort, Hilton Head Island, South Carolina. June 16-17, Westin Crown Center, Kansas City, Missouri. Registration fee: $220 for members, $275 for non-members.

MEDICAL MALPRACTICE SEMINARS. June 9-10, The Marriott Hotel-West Loop, Houston, Texas. August 26-28, The Homestead, Hot Springs, Virginia. October 13-14, Hyatt Regency, Capitol Hill, Washington, D.C. Registration: $220 for members, $275 for non-members.

REGIONAL POSTGRADUATE CONFERENCES. May 6-8, Marriott Resort Griffin Gate, Lexington, Kentucky. August 19-21, Hyatt Regency, San Antonio, Texas. November 6-9, Baltimore Hyatt Regency, Maryland. Tuition: $15 per hour for members; $22.50 per hour for non-members.

ANNUAL SCIENTIFIC ASSEMBLY. November 6-9, Baltimore Hyatt Regency, Maryland.

For further information, contact Jeanette Stone, Southern Medical Association, Post Office Box 2446, Birmingham, Alabama 35201.

March 10-12

10th Annual Surgical Forum. The University of Mississippi Medical Center. Holiday Inn Downtown, Jackson. 22 hours Category I AMA. Registration: $275. For further information, contact Continuing Education, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216.

March 17-19

14th Annual Topics in Internal Medicine. University of Florida College of Medicine, Department of Medicine. Gainesville Hilton, Gainesville, Florida. 21 hours Category I AMA. Registration: $200 physicians; $100 residents, interns, nurses, allied health. For further information, contact University of Florida, Continuing Medical Education, Box J-233, JHM Health Center, Gainesville 32610; telephone (904) 392-3143 or 392-3183.

March 25-26

Arkansas Chapter, American College of Surgeons Spring Meeting. Arlington Hotel, Hot Springs. For further information, contact Dr. Samuel Landrum, Chapter Secretary, 522 South 16th, Fort Smith 72901; phone 785-4181.

May 5-8

107th Annual Session Arkansas Medical Society. "Old and New—A Delicate Blend." Hilton Hotel, Fayetteville. For further information, contact Leah Richmond at headquarters office in Fort Smith.

May 19-21

National Conference-Breast Cancer-1983. American Cancer Society. Boston Sheraton Hotel, Massachusetts. 16½ hours Category I AMA; 16½ AAFP prescribed hours. For further information, write Nicholas G. Bottiglieri, M.D., Breast Cancer Conference, American Cancer Society, 777 Third Avenue, New York, New York 10017; telephone 212-371-2900.

* * * *

MINUTES — HOUSE OF DELEGATES ARKANSAS MEDICAL SOCIETY November 14, 1982

The House of Delegates of the Arkansas Medical Society met at 1:30 p.m. on Sunday, November 14, 1982, in the Camelot Inn, Little Rock. Speaker of the House Amail Chudy of North Little Rock presided. Invocation was by W. Payton Kolb.

Speaker Chudy advised the members that past president Robert Watson was not feeling well and suggested that letters and cards be forwarded to him.

Roll call was by Executive Vice President C. C. Long. Those responding were: Arkansas, Gerald Guyer; Ashley, Donald L. Toon; Baxter, John F. Guenthner; Benton,Michael Platt; Boone, Jean C. Gladden; Clark, James T. Blackmon; Craighead-Poinsett, B. P. Raney, Joe T. Wilson; Crawford, Millard C. Edds; Crittenden, C. Herbert Taylor; Garland, Gaither C. Johnston; Greene-Clay, J. Darrell Bonner; Hempstead, Jim McKenzie; Independence, Lloyd G. Bess; Jefferson, John Crenshaw; Johnson, Boyce W. West; Lonoke, Fred C. Inman; Mississippi, Sybil Hart; Nevada, Michael C. Young; Ouachita, Robert H. Nunnally; Polk, David D. Fried; Pulaski, Robert F. Shannon, John McCollough Smith, Edgar J. Easley, Gordon P. Oates, C. Reid Henry, Ellery C. Gay, Jr., Harry P. Ward, Fred O. Henker, Douglas E. Young, Carlos A. Araoz, William J. Morton, Warren C. Boop, Jr., Paul J. Cornell, Charles H. Crocker, David L. Barclay, Charles H. Rodgers, J. Mayne Parker, and Arthur E. Squire, Jr.; Sebastian, A. Samuel Koenig and Maurice C. Martin; Tri-County, Michael N. Moody; Union, Willis M. Stevens; Van Buren, John A. Hall; Washington, Lee B. Parker, Mae Nettleship, Warren Murry and John Boyce; Yell, James L. Maupin. Councilors, Merrill J. Osborne, J. Larry Lawson, Jim E. Lytle, John E. Bell, John Hestir, L. J. Pat Bell, Lloyd G. Langston, John P. Burge, George Warren, Cal R. Sanders, F. E. Joyce, James D. Armstrong, E. K. Clardy, Ronald J. Bracken, W. Ray Jouett, William N. Jones, Frank E. Morgan, Charles W. Logan, Richard N. Pearson, Rhys A. Williams, Charles F. Wilkins, and Ken Lilly. President, Morriss M. Henry; President-elect, Asa A. Crow; First Vice President, Paul A. Wallick; Speaker of the House, Amail Chudy; Secretary, Elvin Shuffield; Treasurer, James M. Kolb, Jr.; Past Presidents, Ben N. Saltzman, Joe Verser, C. R. Ellis, T. E. Townsend, A. S. Koenig, Jr., W. Payton Kolb, George F. Wynne, Ross Fowler, Kemal Kutait, Stanley Applegate, and Purcell Smith, Jr.

Speaker Chudy gave special recognition to the associate executive vice president, Leah Richmond, for her thirty years of service to the Medical Society. Members of the House responded by giving her a standing ovation.

James Weber, chairman of the Committee on Medical Legislation, presented a report to the House. Dr. Weber asked that all members contact their senators and representatives immediately during the coming legislative session upon receiving legislative bulletins from the Society office.

Dr. Weber reported that the committee had reviewed numerous items which would probably be considered during the 1983 legislative session. He presented the following recommendations from the Committee:

1. Freedom of Information
 That legal counsel be directed to draft legislation for Medical Society sponsorship to make hospital staff committee meetings, particularly credentials committee meetings, exempt from the Freedom of Information Act.
2. Administration of Adrenalin
 That the Medical Society sponsor legislation to authorize certain trained lay people such as school teachers, forest rangers, etc., to administer adrenalin to persons suffering from anaphylactic reactions to insect stings.
3. Driving While Intoxicated
 That the Society support the position of the American Medical Association encouraging

more stringent enforcement of drunk driving laws.

4. Health Insurance Payment Provisions
 That the Society oppose in principle the general concept of a proposal to mandate health insurance coverage for payment to licensed social workers for treatment of mental and nervous conditions.
5. Infant Seat Restraints
 That the Society endorse and support legislation proposed by the Highway Safety Commission requiring that safety seat restraints be provided for all children under age 5, except for children between 4-5 using seat belts.
6. Dispensing of Drugs by Physicians
 That members of the Society provide the committee with information concerning dispensing of drugs by physicians.
7. Radiation Health and Safety Act
 That the Society support efforts of the State Health Department to enact legislation pertaining to use of radiation in treatment by physicians.
8. Drug Investigative Unit
 That the Society support a legislative proposal requiring that the head of the Drug Investigative Unit of the State Health Department be a member of the health profession.
9. Midwifery
 That the Society go on record as opposing lay people to practice midwifery, and supporting the concept that births should be in hospital settings supervised by physicians.

Dr. Weber advised the members of the House that the Health Department is expected to introduce legislation to suspend the Premarital Blood testing requirement with the provision that it could be reinstated if deemed appropriate by the Health Department. The Council of the Society had previously endorsed this proposal.

Dr. Weber encouraged physicians to discuss health legislative issues with members of the General Assembly. He also suggested that members volunteer for the "Doctor of the Day" program during the legislative session.

Dr. Weber briefly discussed a proposal by Beverly Enterprises for a demonstration project on delivery of health care to Medicare and Medicaid patients. At the request of T. E. Townsend of Jefferson County, the Society's initial letter of response to Beverly was read to members of the House. The letter presented numerous questions regarding the proposal and requested that the Society be kept informed on the proposal. Dr. Weber reported that his committee felt the Society should continue to communicate with Beverly concerning the proposal but that no endorsement of the concept be given at this time. Councilor Lloyd Langston suggested that delegates contact the Society office for a copy of the Beverly proposal.

Upon motion of Shuffield, the House approved the recommendations of the Committee on Medical Legislation as presented by Dr. Weber.

Councilor Ray Jouett, Eighth District, presented recommendations from the Pulaski County Medical Society concerning Section 108 of the Tax Equity and Fiscal Responsibility Act of 1982. The recommendations from the county society were that:

1. the members of the Arkansas Medical Society denounce Federal laws and regulations which impact unfavorably on the practice of good medicine; and
2. that the Society oppose the Federal maneuvers which could fragment and weaken the organizations which represent them; and
3. that the Society recognize that Section 108 of the Tax Equity and Fiscal Responsibility Act of 1982 denies recognition of the services of certain hospital-based specialties as professional medical services.

The Pulaski County Society feels that the language of the section is unacceptable and that the consequences of its implementation can only harm the public, the hospitals and the medical profession.

F. E. Joyce, Councilor from the Sixth District, proposed the addition of two additional recommendations:

1. that the Society's delegates to the American Medical Association support any resolution in opposition of Section 108 of the Tax Equity and Fiscal Responsibility Act;
2. that the delegates to AMA also support efforts to provide for judicial review of policies and regulations pertaining to Medicare reimbursement.

Upon motion of Sybil Hart, the House approved the recommendations as presented by Dr. Jouett and Dr. Joyce.

The House adjourned at 2:35 p.m.

APPROVED: Amail Chudy, M.D.
Speaker of the House

February, 1983

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SCIENTIFIC ARTICLES

Chemotherapy and Combined Modality Therapy in the Management of Large Bowel Adenocarcinomas 311
Frank J. Panettiere, M.D., FACP

Scoliosis School Screening in Arkansas 315
Richard E. McCarthy, M.D., Raymond T. Morrissy, M.D., and Anthony P. Dwyer, M.D.

FEATURES

ECG of the Month 318
John W. Watson, M.D.

Office Orthopaedics: "Progress in the Treatment of Adolescent Idiopathic Scoliosis 319
Charles C. Schock, M.D.

Medical Grand Rounds: "Multiple Myeloma" 323
Ali Mansouri, M.D., FACP

Things to Come 328

Editorial: "Hepatologica" 329
Alfred Kahn, Jr., M.D.

From Other Years: "A Dry Town" 331

Medicine in the News 331

Minutes of the Council 332

Keeping Up 334

Personal and News Items 336

New Members 338

Obituary 339

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Chemotherapy and Combined Modality Therapy in The Management of Large Bowel Adenocarcinomas*

Frank J. Panettiere, M.D., F.A.C.P.**

Yes, treatment choices are limited for the patient with unresectible large bowel carcinoma. Nevertheless, there is a good deal that we can do. Cancer chemotherapy drugs can be given systemically to try to treat disseminated tumor or they can be given regionally by means of local infusions. In addition drugs may be used in combination with surgery or with radiation therapy or both. In this paper we will discuss all of the above approaches to the therapy in large bowel tumors.

SYSTEMIC CHEMOTHERAPY

To treat large bowel tumors today are three major drugs and several minor ones as well as various combinations. The first major drug to treat large bowel tumors is *5-Fluorouracil*. 5-FU is most commonly given by IV bolus injection. The two common schedules are either five consecutive days each month or once a week. Either way, primary toxicity is myelosuppression and gastrointestinal toxicity with stomatitis and diarrhea is second. The once-a-week schedule seems to offer less toxicity, probably because adverse effects can be discovered early and averted before they become severe. Proponents of the once-a-week schedule feel that it is "just as good" as the five day in-a-row schedule. No one seems to feel that the weekly schedule has a superior anti-tumor effect. On the other hand, many feel that the five consecutive day schedule offers greater anti-tumor effect. The consensus seems to be that the five consecutive day schedule is more toxic but with sufficiently greater effectiveness to make the increased toxicity worthwhile.

Another way that 5-FU is given is by continuous infusion. If it is given by continuous 96 hour infusion a much higher dose can be given without significant myelosuppression. By this schedule the major toxicity is on the gastrointestinal tract. Because continuous infusions are much more cumbersome, one could ask whether it would be worthwhile to trade such inconvenience and symptomatic toxicity for asymptomatic falls in blood counts. The main place where an infusion of 5-FU might be worthwhile is if the drug is given in combination with myelosuppressent drugs. Clearly if 5-FU is given by a myelosuppressive schedule in combination with another myelosuppressive drug, then the dose of both must be reduced. However, if a non-myelosuppressive slow continuous drip of 5-FU is given, then a full dose of another drug with bone marrow toxicity can be given in combination with a high dose of the 5-FU. We will discuss more about this in a moment.

Besides such parenteral routes, 5-FU is also given by mouth. Advantages for this route are said to include convenience and perhaps higher levels due to absorbtion through the portal circulation. However, oral 5-FU should not be depended upon because of very erratic absorption. Even in the same patient, absorption may vary between 20% and 80% of the administered dose. Two analogs of 5-FU; namely, 5-FUdR and Ftorafur, have also been used clinically but neither seems to have any real advantage over 5-FU itself.

The second major drug to treat large bowel cancer is *Mitomycin-C*. The major toxic effect of this anti-tumor antibiotic is myelosuppression although it also causes gastrointestinal toxicity. Less common problems include skin damage if the drug extravasates and, rarely, renal toxicity. Because it has a long duration of effect, commonly it is used on a once every eight week schedule. Mitomycin-C did have an analog, Methyl Mitomycin-C, which was known as Porfiromycin.[1] It did not seem to be clinically different from Mito-

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mycin-C and it is no longer available in this country.

The third major drug to treat large bowel tumors is *Methyl CCNU*. Its major toxicity is delayed and prolonged myelosuppression. Therefore, it too is given every eight weeks. Patients often have nausea and vomiting for a few hours after each of these doses. It is given by mouth. Currently, MeCCNU is not commercially available and is supplied to recognized oncology investigators by the National Cancer Institute. Related to Methyl CCNU are CCNU and BCNU. Although these latter two drugs seem to have similar effects to MeCCNU, it is felt that they are less effective in the management of gastrointestinal malignancies. The advantage of CCNU and BCNU is the fact that both are readily commercially available.

For over 20 years, many *other drugs* have been tested for effect against large bowel tumors. The effects have been minimal. One of the drugs often used is Oncovin. There are no solid data proving any significant benefit for this drug in gastrointestinal malignancies. But, because its primary adverse effect is neurotoxicity, it is often used in combination with one or more of the myelosuppressive drugs, because although it may add very little, it does not require a decrease in the dose of one of the other drugs. Another minor drug in the management of colorectal cancer is the antiestrogen drug Tamoxifen. It was tested in colorectal cancer because in approximately 25% of such tumors, in men and in women, the tissue contains estrogen receptors.[2] A recently completed Southwest Oncology Group Study demonstrates that this drug has some minimal effect against the tumor. Interestingly, the overall duration of survival of patients treated primarily with Tamoxifen is in the same range as patients initially treated with "standard" drugs including 5-FU.[3]

The *drug combinations* used for large bowel adenocarcinoma generally include 5-FU plus either Mitomycin-C or MeCCNU. If 5-FU is given by bolus, generally the other drug is given on the first day of each course. The 5-FU is also started on the first day and may be given once a week until the blood counts begin to fall. Approximately eight weeks later, when recovery of the blood counts has fully been established then another course is given.[4] A comparative study shows such in Methyl CCNU plus 5-FU combination causes nearly three times as many responses as 5-FU alone.[4] An alternate way that bolus 5-FU might be given along with Mitomycin-C or MethylCCNU involves one of the two drugs given on the first day. In addition, daily for four or five days, the patient receives 5-FU. Another four- or five-day course of 5-FU alone is given five weeks later and another full course is begun every 10 weeks.[5] The alternate method of combining the drugs with 5-FU is of course to give the latter by continuous 96-hour infusion so as to give larger doses wthout risking excessive myelosuppression. Here, 5-FU is given in 96-hour courses every four weeks with Mitomycin-C,[6] MeCCNU,[6] or both[7] given on the first day of every other course.

COMBINED MODALITY THERAPY

There are problems with combined modality approaches of chemotherapy, radiotherapy and surgery. First we will discuss the combination of *radiation therapy prior to surgery*. Here the problem is one of timing. Early after radiation therapy the tissues are very hyperemic and therefore bleeding problems are likely. But a late complication of radiation therapy is fibrosis. Thus, the obliteration of tissue planes can make subsequent surgery difficult. Approximately 8-10 weeks after radiation therapy seems the best time for surgery. Then, the hyperemia is likely to have faded and without fibrosis yet becoming established.

There are two problems with *radiation therapy following surgery*. Radiation therapy is most effective against well oxygenated tissues. Clearly, after a surgical procedure interrupts the blood supply, tissue oxygenation is diminished, impairing radiation therapy effectiveness. The other problem is that after surgery, bowel adhesions are likely. If the bowel is fixed in one area, then the same area of bowel might be receiving an excessive dose of radiation causing enteritis, diarrhea, and perhaps perforation.

Chemotherapy combinations with other modalities also offer problems. The data from the VA Surgical Adjuvant Group made it clear that if chemotherapy is begun the day of surgery intolerable "surgical" complications are likely to occur.[8] Simultaneous administration of chemotherapy and radiation therapy can result in excessive myelosuppression. Of course the exception here would be if one utilizes non-myelosuppressive chemotherapy, such as the continuous infusion of 5-FU. There is an additional theoretic

advantage here in that continuous infusion of 5-FU may radiosensitize and therefore enhance the effects of the radiation therapy. If chemotherapy is given in combination with immunotherapy there is the problem that chemotherapy is immunosuppressive.

REGIONAL CHEMOTHERAPY

Not only is chemotherapy given systemically, but it can also be given by regional infusion. Regional chemotherapy to the liver can often give important and prolonged palliation. Bowel tumors spread to the liver by means of the portal vein and are initially sustained by the portal circulation. Therefore there are currently in progress experimental studies testing portal vein cannulation and drug perfusion as postoperative adjuvant against early growth in the liver. However, soon in its growth the tumor takes its blood supply from the hepatic artery. Therefore, when there is gross disease to palliate, hepatic artery perfusion is more appropriate. If the hepatic artery is cannulated by the surgeon under direct vision in the operating room he would not need to be immobilized as he would with percutaneous hepatic artery cannulation by an angiographic technique. Normally 5-FU is given in a dose of 20mg/kg/day for four days followed by 15mg/kg/day for an additional 6-10 days. If the patient's tumor has not had previous exposure to that drug, expect a 60-65% likelihood that the hepatic metastatic disease will regress for several months. If the tumor had grown despite peripheral vein 5-FU, there is still a 40% chance that hepatic metastasis will regress after hepatic artery 5-FU chemotherapy.

Recent experience indicates that Cis Platinum infusions into the hepatic artery may be equally successful.[9] By peripheral vein, Cis Platinum has no effectiveness against colorectal tumors because it is promptly protein-bound. However, if the drug is given by direct arterial infusion effect against colorectal tumors seems to occur while that drug is still in an active form. An advantage of hepatic artery Cis Platinum is the fact that the infusion can be completed in one to two hours instead of the 10-14 days it takes for 5-FU. Although hepatic artery Cis Platinum is still considered an experimental procedure we have used it in four patients, two in Little Rock and two in Rogers. It is too soon to determine response in two. Of the others, one had a six-month regression and one had a five-month regression of hepatic metastasis. In both, the first subsequent growth of tumor was extra-hepatic although the liver metastasis regrow soon thereafter.

ADJUVANT THERAPY

Although several approaches to increase the chance for surgical cure by the use of other modalities are being tried, today one cannot call any of these definitely beneficial. Pre-operative radiation therapy is used in rectal tumors because adenocarcinoma of the rectum spreads in a confined area in the pelvis before it disseminates widely. So therefore a reasonable radiation port may be designed. Postoperative radiation therapy is also used to treat the regional drainage of rectal tumors. Adjuvant radiotherapy has also been given directly to the liver. This latter use often results in intolerable nausea and vomiting. Total abdominal radiotherapy has been advocated by some either by itself or in combination with a continuous infusion of 5-FU. Each of these procedures are experimental and unproven at this time.

As far as postoperative adjuvant chemotherapy is concerned there are two major approaches. Drugs may be given systemically and generally involve 5-FU alone, or 5-FU and MeCCNU. Multiple uncontrolled studies suggest benefit for such postoperative adjuvant chemotherapy approaches.[10,11] Controlled studies, however, have not yet demonstrated conclusively meaningful benefits. 5-FU has been used in 1,500 patients in various schedules by the VA Surgical Adjuvant Group when all of these different approaches are lumped together (a procedure which many statisticians feel is inappropriate), a statistically significant P value of 0.05 is reached.[12]

A recent report on the randomized G1 Tumor Study Group adjuvant protocol which entered 620 patients between 1975 and 1980 is clearly too early to give conclusive results. But, preliminarily, there is no advantage for drug therapy compared to surgery above controls.[13] During the same time frame, the Southwest Oncology Group completed a randomized study between MeCCNU and 5-FU chemotherapy, or the same plus immunotherapy, or no immediate treatment control group. Although the 626 patients entered on this study remain too preliminary for definitive conclusions, the tendency has been for both treatment groups to have superior disease-free survivals compared to the control group.[14,15] Not surprisingly, the post-relapse survival for those who did relapse

on that study tends to be longer in those who had not had previous adjuvant chemotherapy. In a year or two the data on this study should become adequately mature to indicate whether or not such postoperative adjuvant chemotherapy (or chemo-immunotherapy) mght be beneficial.

As far as immunotherapy of colorectal cancer is concerned, the most commonly used agent has been BCG and in most studies has been used by scarification. In the Southwest Oncology Group Study,[14,15] we chose to use this drug orally both to diminish the local toxicity of scarification BCG and also so that any possible immunologic response would be maximal in the lymphoid tissue directly draining the GI tract. Although the current data are not nearly definitive, and certainly not statistically significant, they suggest that those patients in our study receiving chemotherapy plus oral BCG tend to do better than those who receive the same chemotherapy alone, and both of these do better than the no immediate treatment control group. An update with these conclusions has been accepted for presentation at the International Cancer Congress this coming fall.[16]

Although much of the tone of this paper may tend to make one over optimistic about the effects of therapy in the treatment of colorectal cancer, that is not the intent. What we have today is only limited effectiveness. But clearly what is available is far more beneficial than is generally believed. As far as the patient is concerned almost anyone will express the feeling that even only one chance in 10 of causing a transient tumor regression is better than no chance at all. Therefore, besides being realistic, a physician caring for a patient with large bowel tumors should advise him honestly of those options that might have some chance of helping his prognosis.

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Scoliosis School Screening in Arkansas

Richard E. McCarthy, M.D.,* Raymond T. Morrissy, M.D.,** and Anthony P. Dwyer, M.D.***

School screening for scoliosis is becoming increasingly popular throughout the United States and is presently being carried out in most states throughout the country.

The screening for scoliosis was first carried out by the United States Army in 1910 when an incidence of 7.2 per thousand was found among the recruits. Brooks, in a study done in 1972 found an incidence of 136 per thousand amongst seventh and eighth grade children. Further follow-up studies done in Wisconsin (1974) and in Minnesota (1977) found an incidence of 51 and 34 per thousand respectively in school age children. But the incidence of scoliosis being considered depends upon the severity of the curve being used as the cutoff, in other words, some studies will not take into account curves less than 10°. So the true incidence is probably closer to that found by Rogala of 45 per thousand or 4.5% of seventh and eighth grade children. This was found in a school population of 26,947 children in Montreal. However, when this figure was broken down and curves less than 10° were eliminated, the incidence of scoliosis was only 2%. Those curves that required treatment numbered less than 3 per thousand or .3% of the population studied. In 1981 Nachemson showed that over a ten year period the number of adolescents under treatment for scoliosis had tripled. However, when considering the number of patients who when first seen required surgical intervention, the figure had dropped from 32% to 12% over the same ten year period implying better screening methods, more bracing and less surgery. Lonstein and his colleagues have reported similar results over an eight year experience in Minnesota during which one quarter of a million children were screened yearly and 3.4% referred for screening. It therefore appears that a substantial percentage of school age children have a scoliotic curve that may need treatment.

How then did scoliosis school screening begin in Arkansas? The School Board was first approached in 1974 by Dr. Charles McKenzie of Little Rock. His pleas for screening of young children for scoliosis fell upon deaf ears. In 1977 Dr. Raymond Morrissy began working with the Arkansas School Health Association and Gwen Efird, R.N. in setting up the protocol for the first organized school screening which took place in the Little Rock School District in 1978. Since then a total of 11,700 students have been screened in the Little Rock School District and a total of 229 referred to physicians for further evaluation and treatment of scoliosis. This reflects an overall incidence of 2%, consistent with the national average. At the present time it is not known how many school districts are participating in school screening, but at the Annual Training Workshop sponsored by Arkansas Children's Hospital and the Arkansas School Health Association in Little Rock on October 9, 1981, 113 persons participated. They were instructed in the key elements of the screening process and in the specifics of carrying out the screening. It has been proven in other areas of the country that in those school districts where there is the greatest amount of cooperation between the administration and the health personnel, the most effective screening is carried out. This also has been shown to be true in Arkansas. It is an interesting fact that in nine states the awareness of this problem has been such that the legislature has mandated the screening for scoliosis in the public school system.

The important elements necessary for establishment of a properly run school screening program include a pre-screening workshop such as that mentioned above to train the personnel carrying out the actual screening process. Most commonly these personnel are the school nurse but in many instances may be allied health personnel, physical education teachers, physical therapists, or even interested volunteers, such as parents. In a one day teaching session, the essentials of how to carry out the screening process and specifically what to look for, are taught. Once this is completed, with the support of the school administration, the school screening process is carried out in a private location in the school where modesty can be maintained. In some schools this may be the nurse's office, in others the library or the locker room. Boys and girls are examined separately and asked to remove their tops, the girls leaving their bras

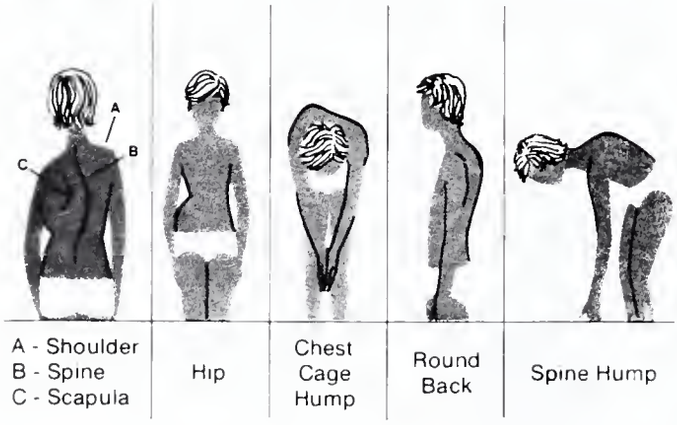
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in place allowing for better acceptance by the students. Those students thought to have scoliosis are referred for a secondary screening session where they are examined by a more experienced screener. This may consist of a local orthopaedist, a nurse specialist or other health person with considerable experience in detecting scoliosis. If he concurs with the findings, a letter is then sent to the child's parents informing them of the finding and recommending that they seek medical evaluation. A diagram is usually included in the letter pointing out the spinal deformity which has been identified (Figure 1) and a form to be taken to the doctor.

The essential thing to look for in the school screening session is the prominent shoulder, usually formed by a rib hump causing the scapula to protrude on the convex side of the curve. Viewed from behind with the arms at the sides, the arm closest to the convex side of the curve is seen to lie closer to the thorax. The opposite arm is seen to be further separated from the thorax on the concave side. On the same side, the area over the iliac crest is usually seen as elevated. The typical idiopathic type scoliosis has a mild thoracic or thoracolumbar curve convex to the right with a right sided rib hump and a compensatory left sided lumbar curve. This is associated with a prominence in the left lumbar region. When viewed from behind, as the child bends forward with his hands together as if to dive into water, the rib hump is more easily seen. Kyphotic or lordotic deformities are most easily seen on viewing the child from the side.

The ultimate question with regard to scoliosis school screening is, is it worthwhile? We know from wide experience that of every 1,000 students age 10-14 years screened 50 are usually found to have scoliosis and 3 will require treatment. It has been estimated that scoliosis school screening costs 6.6 cents per student in a voluntary program such as the one in Minnesota. The major part of which covers the salary of a nurse coordinator assigned to the program, a position that does not exist in Arkansas. Seemingly the cost of school screening should therefore be less than 6 cents per student in Arkansas. To evaluate the cost effectiveness of this program we must consider the cost to society and the family of having one child discovered too late for conservative management and therefore requiring surgical intervention. The cost for surgery is usually between $8,000 and $15,000 per child, whereas the total cost of bracing a child is usually less than $2,000, a marked discrepancy.

FIGURE 1.



The screening process itself is specific for the disease and is sensitive to the needs of students and parents. It allows for effective treatment and the cost of screening is quite low. However, as with any large scale program, problems can arise from school screening. First, the detection process can be too sensitive and children with insignificant curves who otherwise would not have been diagnosed as having scoliosis are referred to an orthopaedist for unnecessary evaluation. Secondly, the hidden costs, in many cases the family of the child receives a letter of referral from the school. The parents in turn consult their family physician for his opinion as to whether or not it is something they should pursue; he charges a fee, as does the orthopaedist recommended by the family doctor. If the orthopaedist does not care for patients with scoliosis he will then refer the child on to a physician who treats such problems. The child will have a 3 foot standing x-ray taken and be charged a fee. Besides the added costs, important consequences resulting from this pattern of referral is the excess radiation exposure to which the child is subjected. Most physicians seeing a child for initial scoliosis evaluation in their office order x-rays, resulting often in unnecessary films taken incorrectly. Before a child is exposed to the irradiation of an x-ray certain questions should be answered. Is the film necessary? How many films and what kind should be taken? How often should they be repeated? What shielding should be utilized, and ultimately, should *I* be the one taking the film? These questions usually are not appropriately addressed. If the film must be taken prior to the child being seen by the tertiary referral center or the ortho-

paedist who treats scoliosis in the community, a standing 14 x 17 x-ray including the top of the iliac crests is usually sufficient as a screening film. In this way the diagnosis can be established and graded. A lateral film is sometimes necessary in order to further define kyphotic problems such as Scheuermann's disease or adolescent round back, otherwise the lateral screening film is not recommended. The iliac crest should be included on the film in order to determine the Risser sign seen on the top of the iliac crest, which is a reflection of bone maturation. A Risser 0 is the least mature grade with ossification of the outer margins of the iliac wing. A Risser 4 signals the end of bone growth as the ossification is completed and the iliac wing capped. Along with measurement of the scoliosis curve the Risser sign can help in predicting the likelihood of progression of a child's curve (Figure 2). A prognosis can be made and a plan of care established in consultation with the child and the parents.

FIGURE 2.

PROGRESSION OF SCOLIOTIC CURVES

Scoliosis Curve	*Risser* 0-1	*Sign* 2-4
<20°	22%	1.6%
20-29°	68%	2.3%

Although it is in its early stages in Arkansas, scoliosis school screening has been shown to be an effective and cost efficient means of identifying the problem of scoliosis. With proper utilization we should be able to minimize the hidden costs and appropriately treat the disease with the least amount of risk for the patient.

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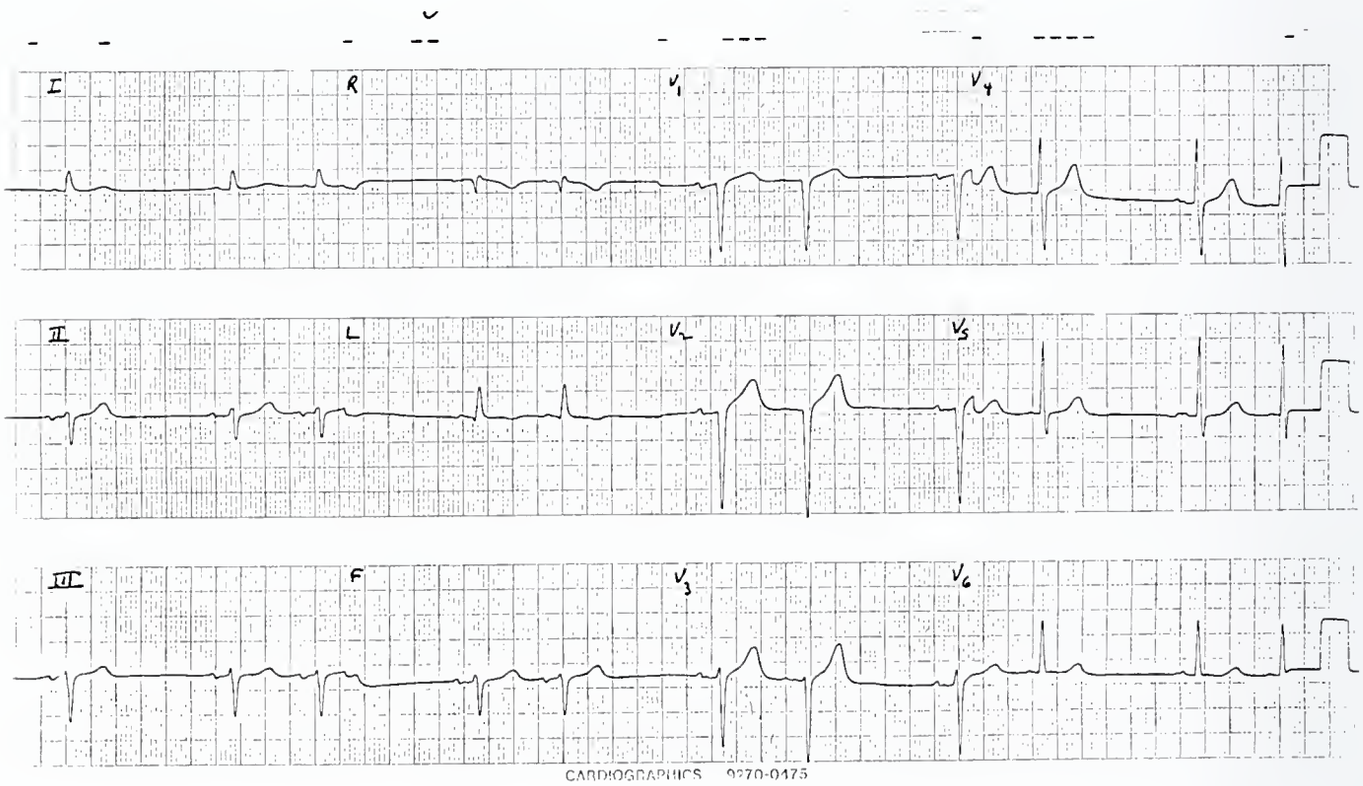
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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 339)

HISTORY: P. M. is a 38-year-old anxious, coffee-drinking man, who presented to an outpatient clinic complaining of palpitations. His cardiac examination revealed a regular irregularity of his pulse. His electrocardiogram is shown below. What is his arrhythmia, its etiology, and its treatment?



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Office Orthopaedics

Progress in the Treatment of Adolescent Idiopathic Scoliosis

Charles C. Schock, M.D.*

The evolution of the treatment of adolescent idiopathic scoliosis is one of the fascinating aspects of orthopedic history. It has been long recognized that exercise alone is not adequate to treat a progressive curve in the growing adolescent. Past decades have been dotted with numerous attempts to succeed with a variety of orthotic devices. An important milestone was the popularization of the Milwaukee Brace in the fifties by Dr. Walter P. Blount. Today the Milwaukee Brace continues to be the standard of care for the adolescent idiopathic scoliotic patient. A variety of low prolile plastic orthoses have been introduced recently and have had some early success with curves in the lower portion of the spine.

The success of any treatment program in the adolescent idiopathic scoliotic lies with holding the curve below a Cobb angle of somewhere around 40°. Beyond this point, the chances of incurring adult complications and disability increase. Based on these criteria, bracing programs may enjoy a success rate in the 90% plus range. A disadvantage of bracing programs is the necessity for periodic brace adjustment and for continuous encouragement in a vigorous exercise program. In addition, phychological monitoring is frequently necessary to tide the adolescent over crises pertaining to peer acceptance of visible bracing, as well as the tolerance of a certain degree of inconvenience and discomfort. These pitfalls have been negotiated by numerous successful treatment centers, but nonetheless the desirability of less arduous treatment programs remains.

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In the early seventies Bobechko introduced an implantable device for continuous stimulation of the paraspinous musculature on the convex aspect of the curves but the tendency to produce lordosis, various technical problems and the need for an operation have prevented the widespread acceptance of this method. Nearly five years ago, John Brown and Jens Axelgaard introduced a technique of lateral electrical stimulation (L.E.S.) in which the lateral, rather than the posterior paraspinous musculature, was stimulated transcutaneously. Their preliminary results have been presented on a yearly basis to the Scoliosis Research Society meetings and at the recent meeting in September of 1982 at Denver, they reported on the treatment of 548 patients by 58 investigators in North America and Western Europe.[1] Patients treated in this study were selected by criteria which would ordinarily select these patients for brace treatment. By standard x-ray follow-up, the degree of success in preventing curvature progression was similar to that achieved in bracing programs, even in some that had completed growth.

The lateral electrical stimulation technique has as its major advantage the necessity of use for only approximately eight hours per day, while the child is sleeping, leaving her completely free of orthoses during the day. It requires dedication by both the scoliosis team members and the patient of a different nature than required by a bracing program, but this has been successfully negotiated. The major complication is that of cutaneous irritation but, in all but a very small percentage of the patients, this was circumvented

by altering the nature of the adhesive electrodes and dermatologic treatment. The overall impression was that the L.E.S. method of treatment was an effective alternative to bracing, especially in patients in whom bracing was unsuccessful or unacceptable.

Three other scoliosis treatment centers offered reports at the recent meeting of the Scoliosis Research Society regarding similar cutaneous stimulation regimens on their own patients.[2,3,4] These reports also concluded that cutaneous stimulation gave results comparable to bracing, and that this was a viable treatment alternative in adolescent idiopathic scoliosis.

Based on our evaluation of these yearly reports, we at the Little Rock Orthopedic Clinic have concluded that electrical stimulation technique would be of benefit to some of our patients and have adopted the protocol of the international study on lateral electrical stimulation for the treatment of scoliosis (ISO-L.E.S.S.). To date, we have several patients under treatment. The following are treatment details and observations we have made.

For single curve L.E.S. treatment, a single channel stimulation device is used. Dual channel devices have recently become available for use in double major curves. For thoracic curves, the ribs adjacent to the apex of the curve are identified and traced out to the posterior auxillary line. Two electrodes are then placed over these five to ten centimeters apart. The spinous processes of the curve are then palpated manually in preparation for assessing the effect of stimulation on the curve (Fig. 1).



Figure 1

Stimulation is carried out by protocol at a level of seventy milliamperes for a period of six seconds, followed by an interval of six seconds of no stimulation to allow muscle recovery. The patient is usually not able initially to tolerate the full seventy milliamperes and a level of perhaps thirty to forty milliamperes is administered and the effects of the stimulation are estimated by movement of the spinous processes of the apex of the curve (Fig. 2). The intensity of the stimulation is monitored by an oscilloscope seen in Figure 2 just above the patient's head. Based on the manually palpated degree of response of the curve apex to stimulation, the electrodes may be moved to achieve maximum correction.

When optimal electrode placement has been determined, locations are specifically marked for repeated placement every night, by measuring first the vertical distance from the upper and lower electrode to the spinous process of C7 (Fig. 3). Then the distance from the midline to the optimal placement sites for the upper and lower electrodes are also measured and recorded on an instruction sheet (Fig. 4). The patient is then instructed to first wear the device for a brief period of time and gradually over the next few days increase the amount of time for the device to be worn. The level of stimulation is controlled by the patient by a dial on the control box and she is instructed to gradually increase stimulation to the ideal level of seventy milliamperes. It is anticipated that by the two-week check-up the patient will have achieved seventy milliamperes and the ability to sleep with the device in operation.

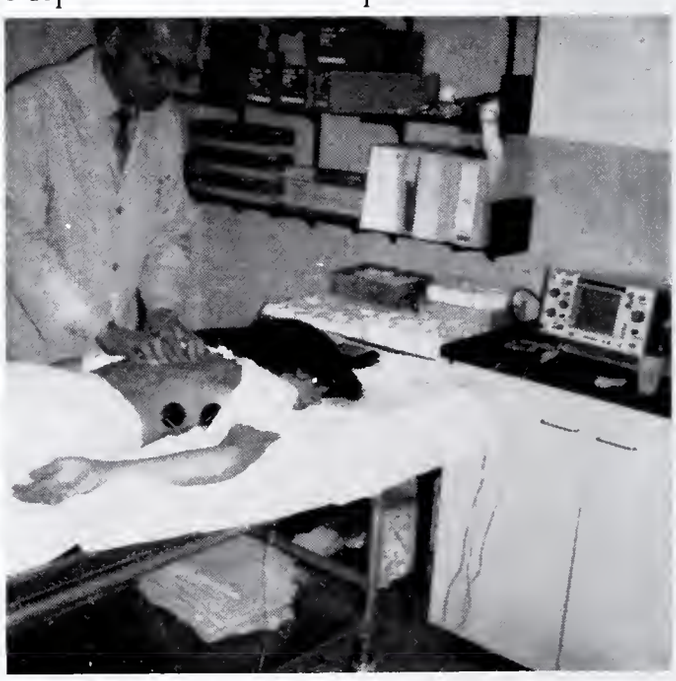


Figure 2

At that time, the effects of stimulation are assessed by x-ray. A specially constructed x-ray cassette box allows the patient to lie prone while we obtain a full length scoliosis x-ray (Fig. 5). Unstimulated, and then stimulated x-rays are obtained, the latter with electrodes in optimal position at a level of seventy milliamperes (Fig. 6). Both x-rays are measured by Cobb technique and if a decrease in scoliotic curvature of greater than five degrees is achieved, stimulation is considered effective (Fig. 7).

As an example, patient J. C. had a thoracic curve which had progressed to 24° (Fig. 8). Her prone, non-stimulated curve was 18° (Fig. 9), which reduced further to 5° on stimulation (Fig. 10). Her treatment was continued based on these values.

The ultimate effectiveness of L.E.S. treatment is determined by serial standing scoliosis x-rays taken at three to four-month intervals, similar to brace treatment evaluation. The device is completely portable and by exchanging rechargeable batteries on a daily basis it may be carried with the patient to outings and visits with minimal, if any, disruption in treatment pattern. Skin irritation has been the main complication to be reckoned with. Different options for adhesive electrode material exists, and by judicious alteration



Figure 3

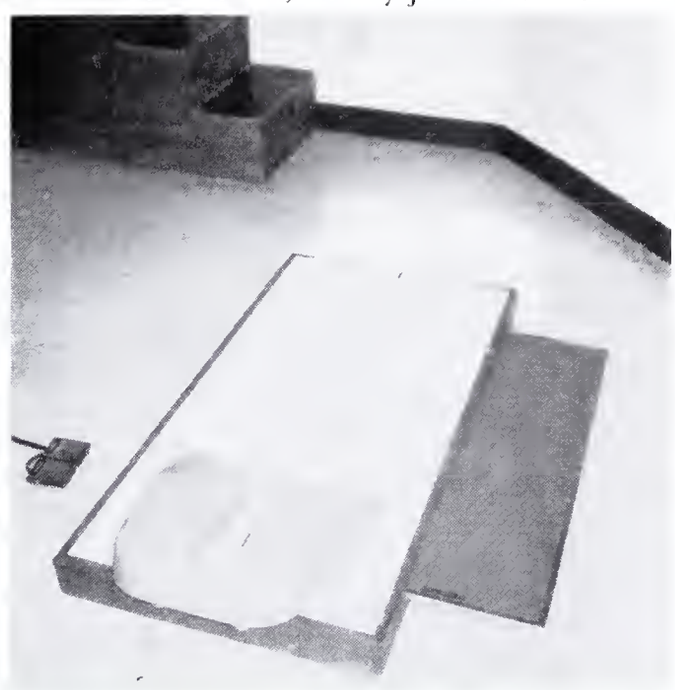


Figure 5



Figure 4



Figure 6

of method, most skin problems can be avoided. Occasionally, corticosteroids are of benefit. In the reported series, very few patients were discontinued from treatment due to cutaneous problems.

It seems apparent that the L.E.S. method of treatment requires at least an equal amount of dedication to carrying out details as does brace treatment. Conscientious families and scoliosis treatment teams, however, can succeed. The main benefit of L.E.S. treatment would appear to be the freedom from inconvenience during the waking hours, but this is important in many patients. The use of the L.E.S. method is a useful adjunct to conventional treatment of adolescent idiopathic scoliosis.



Figure 7

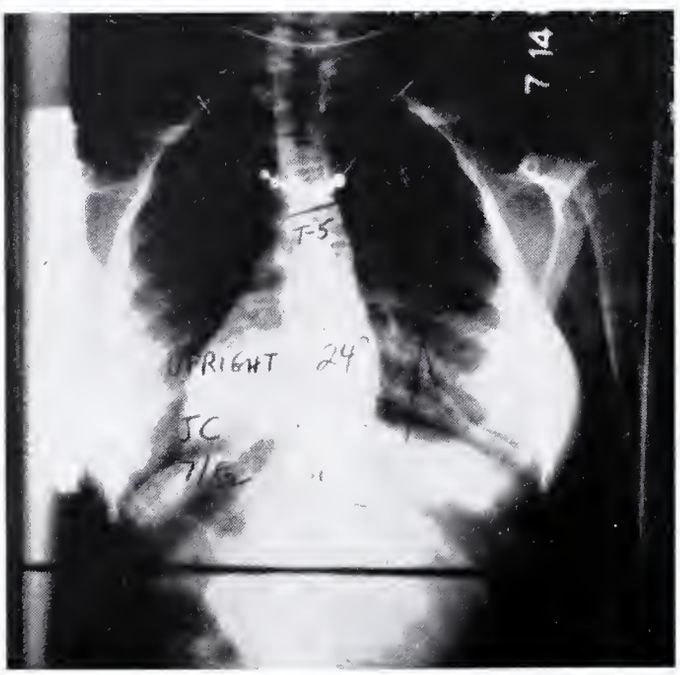


Figure 8

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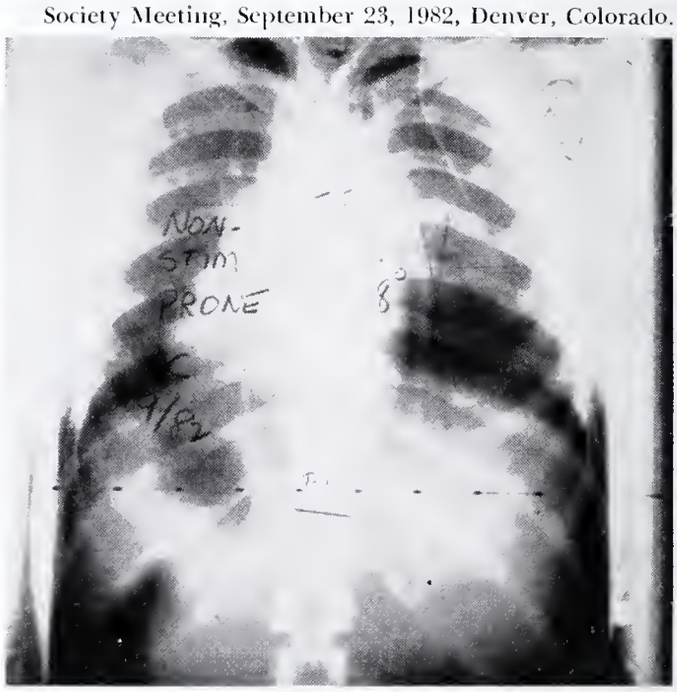


Figure 9

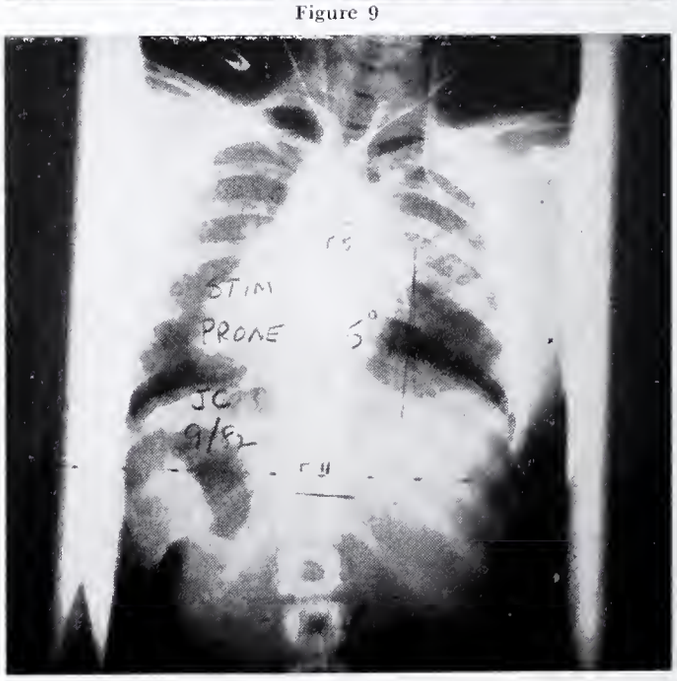


Figure 10

MEDICAL GRAND ROUNDS

MULTIPLE MYELOMA

"A Brief Review"

Ali Mansouri, M.D., F.A.C.P.*

Introduction

Multiple myeloma is an uncontrolled proliferation of plasma cells which leads to bone marrow replacement, inhibition of the growth of normal cells and overproduction of monoclonal immunoglobulins (paraproteins).

Myeloma has been known clinically for many years. The first report of a patient with this disorder was published by Dalrymple in 1846.[1] The following year Bence-Jones discovered an unusual protein in the urine of this patient which has carried his name ever since.[2] Another milestone was laid by Waldenstroem when he described macroglobulinemia in 1944.[3] Since that time a great many clinical and laboratory scientists have contributed to the understanding of plasma cell disorders.

Multiple myeloma is relatively rare and constitutes about 2% of all malignancies. The peak incidence is in the seventh decade. There is a higher incidence in the black than in the white population. The Chinese have a low incidence of this disease. Although the disease is usually fatal, it responds often to treatment. Complete remission can be achieved in a large number of cases with judicious use of chemotherapy and radiotherapy.

Etiology and Pathogenesis

Similar to other hematologic malignancies, the etiology of multiple myeloma is unknown. Exposure to ionizing radiation and cytotoxic agents of the alkylating type might be causes or predisposing factors in the development of multiple myeloma. The close relationship between certain types of viruses and neoplasia in animals suggests as well that this might be the cause of myeloma in man but such proof is lacking. The production of plasmacytoma in BALB/c mice after repeated intraperitoneal injection of mineral oil suggests that chronic stimulation of immunocytes could lead to this type of neoplasia.[4] Again such an evidence is lacking for human myeloma. The occurrence of alpha heavy chain disease (α-HCD)[5,6] in the Mediterranean area strongly suggests that certain environmental factors might be responsible in the causation of at least this type of myeloma. It has also been reported that a case of alpha heavy chain disease responded to antibiotic treatment and experienced complete remission.[7] Although this is suggestive of an infectious etiology, similar cases are extremely rare. The pathogenesis of multiple myeloma stems from the relentless proliferation of plasma cells which leads to bone resorbtion, inhibition of growth of normal cells and overproduction of myeloma proteins. The interrelationship between these processes and the clinical symptomatology are summarized in figure 1.

Clinical Manifestations

Multiple myeloma is at times asymptomatic and is occasionally discovered during a routine physical and laboratory examination or during hospitalization for an unrelated disease. However in the majority of cases the patient seeks help because one or more manifestations of multiple myeloma are present. The major clinical manifestations of myeloma are presented in Table I.

Bone pain is a common symptom and is due to generalized osteoporosis or local lytic lesions or fractures. The lesions in the non-weight-bearing bones such as the skull are usually not painful. When they are present in the rest of the skeleton they are almost always painful. These bone lesions are generally located within the red marrow. The pain can at times be rheumatic in nature, wandering and intermittent. Rheumatoid arthritis can also be present concomittantly. The bone lesions are frequently lytic but generalized osteoporosis is not uncommon especially in the early stages of the disease. The causes of bone resorbtion are not well understood. It has been assumed for many years that bone resorbtion is related to expansion of tumor cells. This is rather

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simplistic although it could be partly true. One factor which has been described in recent years as a cause of bone resorbtion is the production of osteoclast activating factor (OAF) by myeloma cells.[8,9] It has been shown by Durie et al. that in fact there is a highly significant correlation between the amount of OAF produced by myeloma cells and the extent of skeletal lesions.[10]

Pathologic fractures are common and are often a cause of prolonged disability. When they are located in the ribs or vertebrae, they may not be recognized easily. Fractures located in the ribs can be mistaken for pleurisy or kidney disorder. Fractures in the femur can be manifested as hip or groin pain. It is crucial to diagnose these fractures immediately in order to treat them appropriately. Delay in the diagnosis and treatment might lead to nerve compression and permanent nerve damage with irreversible disability.

Infection is a very common occurrence in patients with multiple myeloma. The causative organisms are often encapsulated bacteria such as pneumococci which cause life threatening lobar pneumonia or meningitis. However other infections such as urinary tract infection due to gram negative bacili are not uncommon. The susceptibility to infection is the result of a multitude of immunologic deficiencies among which low levels of immunoglobulins and granulocyte dysfunction are to be mentioned. Nowadays since almost all patients with multiple myeloma are treated with either radiation and/or chemotherapy, drug induced granulocytopenia is another cause of susceptibility to infection. However leukopenia is at times due to the disease process and should not deter the physician from treatment. This type of leukopenia, which is present at the onset of the illness, usually improves after several courses of treatment.

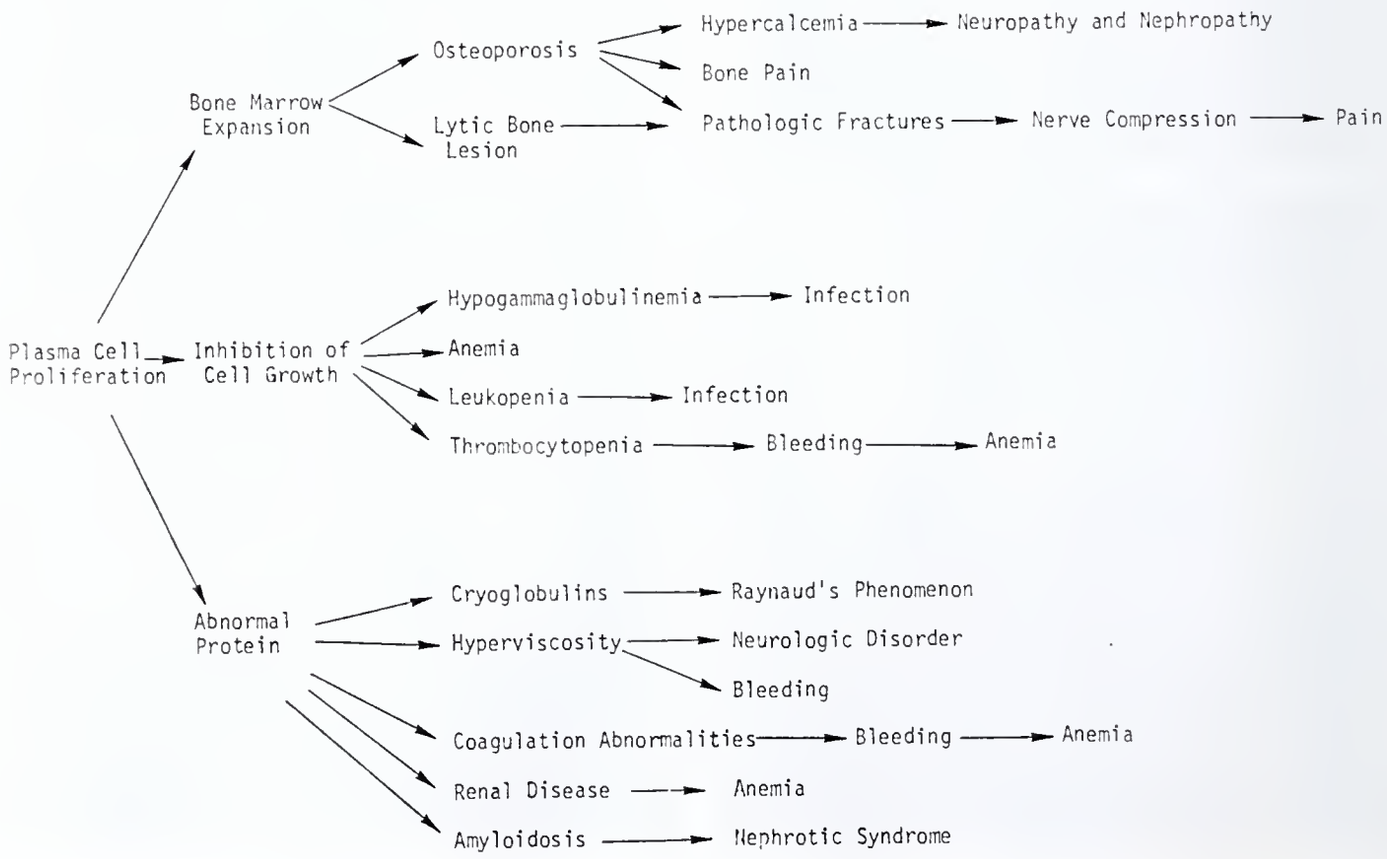
Hypercalcemia is a common problem in patients with myeloma. It is manifested by weakness, nausea, vomiting, dehydration and confusion. Hypercalcemia should be considered as a

TABLE I.
CLINICAL MANIFESTATIONS OF MULTIPLE MYELOMA

Common	*Less Common*
Bone pain	Hyperviscosity Syndrome
Fractures	Amyloidosis
Infection	Fever of undetermined origin
Hypercalcemia	Hemorrhagic manifestations
Renal Failure	

FIGURE I

The Pathogenetic Mechanism of Myeloma



medical emergency and be treated rapidly before the development of hypercalcemic encephalopathy. The latter is manifested by increasing confusion and coma. It should be remembered that the level of serum calcium does not always correspond with the degree of clinical symptoms. This might be due to factors such as blood pH, the level of serum protein, age of the patient or other unknown factors.

Renal involvement in patients with multiple myeloma is not infrequent especially in patients who excrete a large amount of Bence-Jones protein. For some reason the presence of Bence-Jones protein in the tubules interferes with their function and leads to tubular degeneration. Light chains of the λ type are more toxic to the kidney tubules than those of the κ type. Patients who excrete λ chains are more prone to develop renal disease. This could account for the common association of renal disease with IgD myeloma. Jancelewics et al. have reported that 90 percent of patients with IgD myeloma excrete λ type light chains.[11] It should be emphasized that not all renal abnormalities in patients with myeloma are attributed to the development of myeloma kidneys. There are several other factors which should be considered. Many of them are in fact much more easily correctible. The common development of hypercalcemia and hyperurecemia in myeloma are at times responsible for the rapid deterioration of renal function. Urinary tract infection, obstruction or dehydration should always be ruled out. Finally in rare cases the development of renal amyloidosis can lead to renal failure. The development of nephrotic syndrome in myeloma should always suggest renal amyloidosis.

Hyperviscosity syndrome develops in patients who have high molecular weight protein such as IgM and at times IgA immunoglobulins which tend to polymerize easily. It can also develop in patients with IgG myeloma who have a very high serum paraprotein in the range of 6-10 grams/dl. Dizziness, blurred vision, confusion and coma associated with bleeding manifestations are suggestive of this syndrome.

Diagnosis

The diagnosis of plasmacytoma and multiple myeloma is easily made in most instances but situations exist in which it is quite difficult to make a certain diagnosis. It is important to emphasize that the level of the abnormal protein is not diagnostic. About 20 percent of patients with myeloma produce only light chains which are excreted rapidly in the urine. These patients do not show an abnormal protein spike on serum protein electrophoresis. About 1 percent of patients have non secretory myeloma without abnormal protein spike on serum or urine protein electrophoresis. In addition the demonstration of the abnormal protein of certain types of myeloma such as α-HCD is difficult in a routine laboratory and can be easily missed on serum protein electrophoresis.[12] The amount of abnormal protein in the urine is often minimal unless the urine is concentrated. On the other hand, an abnormal protein spike similar to that found in patients with multiple myeloma can be found in patients suffering from other diseases such as lymphoma[13] or in patients who do not have other criteria for the diagnosis of myeloma.[14] The term "benign monoclonal gammopathy (BMG)" was proposed for this group of patients by Waldenstroem.[15] Because some of these patients develop multiple myeloma at a later date, the term "monoclonal gammopathy of undetermined significance (MGUS)" has been proposed.[16] It should be emphasized that the monoclonality of the serum or urine protein is not an absolute criteria for the diagnosis of myeloma. In fact some patients with multiple myeloma have biclonal protein production. For these reasons, the diagnosis of multiple myeloma should be based on several criteria: a) the presence of a monoclonal protein in the serum and/or urine. The monoclonality of the protein should be proven by immunoelectrophoresis using mono-specific antibodies; b) bone lesions which are usually multiple and lytic in type with little peripheral reaction (punched out) and/or generalized osteoporosis; c) the presence of plasma cells in tissue biopsy or bone marrow especially in the form of sheets. Durie and Salmon[8] have developed certain major and minor criteria which can be used as a guide in making the diagnosis of myeloma. These criteria are shown in Table II. Using these criteria, it is easy in most instances to make an unequivocal diagnosis. However, at times when all of the above are not demonstrable simultaneously, it is quite difficult or impossible to make a correct diagnosis. An example of this kind is extramedullary plasmacytomas without involvement of bone marrow. Another situation would be systemic osteoporosis without punched out lesions and low number of

plasma cells in the bone marrow. If no definite diagnosis can be made, it is justified to observe the patient closely for a short period of time and repeat the examinations if the patient is not symptomatic and the physician is satisfied with the extent of the original clinical and laboratory examinations.

Staging

It has been observed that in general the body tumor cell burden and the prognosis of the neoplasia are inversely related. In regard to myeloma, it has been shown in animal models that the number of tumor cells and the amount of myeloma protein are linearly related.[17] It is possible to measure the total tumor cell tumor burden in a given patient using the following formula: total number of tumor cells in an individual equals the total body M-component synthetic rate divided by the cellular M-component synthetic rate.[18] The determination of synthetic rates is not technically available to community hospitals and is costly and cumbersome. A clinical staging system has been developed which is based on easily measurable parameters such as hemoglobin, M-component level, serum calcium and the extent of bone lesions.[19] Using this method, patients with multiple myeloma are divided into three categories according to their tumor cell burden as is shown in Table III. It must be emphasized that the staging of patients has more than academic interest and the tumor cell burden clearly affects the outcome of the disease.

TABLE II.
MAJOR AND MINOR CRITERIA FOR THE DIAGNOSIS OF MYELOMA

Major Criteria

I. Plasmacytomas on tissue biopsy.
II. Bone marrow plasmacytosis with 30% or more plasma cells.
III. Monoclonal immunoglobulin peak on serum protein electrophoresis exceeding 4.0 gm/dl for IgG peaks or 2.0 gm/dl for IgA peaks. Unequivocal evidence of kappa or lambda chain excretion on urine electrophoresis in the absence of amyloidosis.

Minor Criteria

a. Bone marrow plasmacytosis 10-30%.
b. Monocloncal immunoglobulin peak in the serum less than the defined above levels.
c. Lytic bone lesions.
d. Normal IgM less than 50 mg/dl, IgA less than 100 mg/dl, or IgG less than 600 mg/dl.

Diagnosis will be confirmed when any of the following features are documented in symptomatic patients.

1. I + b, I + c, I + d.
2. II + b, II + c, II + d.
3. III.
4. a + b + c, a + b + d.

Treatment

The treatment of multiple myeloma can be arbitrarily divided into two parts: a) non-specific treatment (supportive); b) special treatment (chemotherapy).

a) Non-specific treatment. Bone pain with or without fracture is one of the major complaints of patients with myeloma. The patient should be adequately treated with analgesics. Meanwhile because most of these patients are undergoing chemotherapy and at times might have a low platelet count, one should avoid the non-steroidal analgesics which alter platelet function. The suppression of pain is also important to allow the patient faster mobilization after fractures. In this case the use of mechanical supports should also be considered and encouraged.

All infections should be treated rapidly and thoroughly with appropriate antibiotics. This is

TABLE III.
CRITERIA FOR THE STAGING OF MYELOMA

Stage I. Low tumor mass (when all of the following are present).
a. Hemoglobin more than 10.5 gm/dl.
b. Corrected calcium less than 11.5 mg%. Corrected calcium is the measured serum calcium in mg% minus the serum albumin in gm% plus 4 (see ref. 20).
c. None or few lytic bone lesions.
d. IgG peak of less than 5 gm/dl or IgA peak less than 3 gm/dl or urine light chain excretion less than 4 gm/24 hrs.

Stage II. Intermediate tumor mass.
Fitting neither stage I nor stage II.

Stage III. High tumor mass (when one of the following is present).
a. Hemoglobin less than 8.5 gm/dl (see text).
b. Corrected serum calcium more than 11.5 mg%.
c. Advanced lytic bone lesions.
d. IgG peak more than 7 gm/dl or IgA peak more than 5gm/dl or urine light chain excretion of more than 12 gm/24 hrs.

especially important during chemotherapy when the granulocyte count tends to decrease with each treatment course. Finally the state of hydration and nutrition of the patient should be considered and evaluated thoroughly and repeatedly. Psychological support is also of great importance to the care of all patients suffering from cancer.

b) Specific treatment. Chemotherapy is the treatment of choice in patients with multiple myeloma. Radiation therapy is reserved for solitary plasmacytoma without evidence of systemic disease, palliation of pain or prevention of imminent fractures.

A certain number of drugs are available today. These can be used either singly or in combination. A common treatment regimen is the combination of vincristine, melphalan, cytoxan and prednisone (VMCP). The treatment can be given for 4-5 days every 3-4 weeks. The dosages are generally 1 mg vincristine intravenously on the first day in conjunction with 600 mg/M^2 cytoxan in 250 ml of 5% dextrose in water to be infused slowly. Melphalan 0.2 mg/Kg and prednisone 2 mg/Kg are taken orally from the first through the fifth day. The treatment is repeated every 3-4 weeks. Other drug combinations are available which can be used when the patient develops resistence to VMCP regimen. These are the combination of cytoxan, adriamycin and prednisone (CAP), CAP with vincristine (VCAP) and substitution of cytoxan by BCNU (VBAP). Vincristine should probably be always included in the regimen if the patient does not have significant side effects. There is evidence that patients taking drug combinations containing vincristine have a higher response rate.[21] The overall response is based on subjective changes such as disappearance of pain and objective changes such as a significant decrease in paraprotein and Bence-Jones protein ($> 50\%$) and decrease in the number of bone marrow plasma cells. Complete response is disappearance of all symptoms and signs of disease except the bone lesions which might remain unchanged on X-rays. Assessment of the benefit of treatment should be measured not only in terms of response rate but also in terms of duration of response, patient survival and quality of life. Eventually all patients with multiple myeloma in remission relapse. Little information is available about the best treatment for these patients. Adriamycin and BCNU have been tried alone or in combination. In this way some patients develop a second complete remission or present some reduction of tumor burden and clinical improvement. However, it is clear that there is no effective treatment available for these relapsing patients. Human leukocyte interferon has shown some effectiveness.[22] The exact place of this drug in the treatment of myeloma is not yet known.

Some patients are unresponsive to all kinds of treatments. However, most of them decrease their tumor mass and show some clinical improvement. These patients should probably be treated indefinitely. However if the tumor cell burden is not large, the patient is clinically stable and the serum protein is not rapidly rising, one can choose to observe the patient closely without specific treatment. Patients who develop remission probably do not need maintenance treatment. According to one study patients who responded and were not maintained did as well as patients who were maintained on chemotherapy.[23] In addition the chance of development of acute leukemia increases with the increase in the duration of chemotherapy with alkylating agents. For further information concerning the treatment of myeloma, the reader is referred to two excellent articles by Alexanian and Durie and Salmon.[24,25]

Summary

Multiple myeloma is a B-cell neoplasm which is often a widespread disease at the onset. It leads to expansion of bone marrow with bone resorbtion, inhibition of growth of normal cells and production of abnormal immunoglobulins. These eventually lead to complications such as pathologic fractures, infection, hypercalcemia and renal failure. The diagnosis of myeloma is based on the existence of certain well defined criteria. Once diagnosed, the patient should be staged and the approximate tumor cell burden should be determined. The patient should be treated with the available chemotherapeutic regimens because most patients demonstrate some subjective and objective evidence of improvement. However, the supportive treatment of patients with myeloma is of great importance. The patient should be carefully observed for signs and symptoms of dehydration, hypercalcemia, hyperurecemia and infection. These should be treated promptly and appropriately, otherwise the goal of the specific chemotherapy will be defeated.

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THINGS TO COME

Arkansas Chapter, American College of Surgeons has announced the following meetings for 1983:

Spring Meeting — March 25-26. Arlington Hotel, Hot Springs.

Luncheon Meeting in conjunction with Arkansas Medical Society annual meeting — May 6. Hilton Hotel, Fayetteville.

Annual Meeting — June 9-10. Red Apple Inn, Heber Springs.

For further information on the chapter's meetings, contact Dr. Samuel E. Landrum, chapter secretary, 522 South 16th, Fort Smith 72901.

April 13-15

First Annual Southeast Regional Gerontology Conference. Sponsored by East Tennessee Baptist Hospital. Hyatt Regency, Knoxville, Tennessee. For more information, contact Sheila Gordon, RN, Assistant Director, Staff Development and Training, Coordinator of Gerontology Workshops, East Tennessee Baptist Hospital, Post Office Box 1788, Knoxville, Tennessee 37901; phone (615) 632-5061 or 632-5707.

April 28-30

Advanced Cardiac Imaging. Co-sponsored by

San Diego Cardiac Center, Sharp Memorial Hospital, University of California-San Diego, Scripps Clinic and Research Foundation, San Diego Heart Association and General Electric Medical Systems. 18.5 Category I CME hours. Enrollment fee is $250; $150 for residents and fellows; includes two luncheons.

For further information, contact Nomi Feldman, Conference Coordinator, 3770 Tansy, San Diego, California 92121; telephone (619) 453-6222.

May 5-8

107th Annual Session Arkansas Medical Society. "Old and New — A Delicate Blend." Hilton Hotel, Fayetteville. For further information, contact Leah Richmond at headquarters office in Fort Smith.



EDITORIAL

Hepatologica

Alfred Kahn, Jr., M.D.

One of the rarer conditions which hepatologists encounter is that of membranous obstruction of the inferior vena cava. There has been an interesting article written on th's subject by I. W. Simson (*Gastroenterology,* Volume 82, page 171, February 1982) — entitled "Membranous Obstruction of the Inferior Vena Cava and Hepatocellular Carcinoma in South Africa." In the U.S.A. membranous obstruction of the inferior vena cava is a relatively uncommon disorder and it is seldom recognized prior to autopsy. It is apparently more frequently seen in Japan, Africa, etc. — or at least it has been observed more in these areas. Simson collected 101 cases of membranous obstruction of the vena cava in South Africa. The cases were confirmed by either cavography in 89 cases or by autopsy in 24 — and in 13 cases the lesion was identified by cavography and autopsy. Simson reports that one case was diagnosed at surgery. In reviewing his cases, Simson found that 74% occurred in males and 27% occurred in females; 51% of the male cases had hepatocellular carcinoma and 37% of the female cases had hepatocellular carcinoma. Some of his cases demonstrated a membrane or web at the junction between the vena cava and the right atrium; in some cases there was an absent segment of vena cava. The obstructing membrane was usually fibromuscular in appearance and contained some elastic tissue. The cases often demonstrated marked collateral circulation but the appearance of this was quite variable. The appearance of the liver in the autopsied cases without hepatocellular carcinoma demonstrated large areas of scarring. At least in one case there was some evidence of nodular regenerative hyperplasia. Histologically, Simson reports that the most striking feature was centrilobular fibrosis; he also states there was bridging fibrosis between adjacent centrilobular areas. Of particular interest in this series is that neoplasm of the liver was found in 49 cases; one case was a benign tumor; the others were carcinomatous. The principal finding in these cases as demonstrated by the author was hepatomegaly in 92% of the cases, esophageal varices in 71%, abdominal venous collateral vessels in 71%, ascites in 62%, peripheral edema in 60%, raised juggler venous pressure in 40%, splenomegaly in 39%, and varicose veins in 33%. It is reported that jaundice was usually a terminal event. A few cases had a cough and it is postulated it was due to varices pressing on the laryngeal nerve. Some of Simson's cases were submitted to surgery — nine had a surgical

repair of the membranous obstruction of the vena cava, and of these, five did well at least for one year. Simson feels that the vena caval membrane is probably congenital in origin, and that the collateral circulation indicates the lesion has been causing circulatory problems for a considerable period of time prior to the diagnosis. The author suggests that the patients might be exposed to some exogenous teratogen operating in the regions where this lesion is most common—Japan, India, and South Africa. He also feels that based on his pathological studies the term membranous obstruction should be dropped and the expression atresia of the eustachian valve should be used. He cautions the medical public to look for this lesion in high incidence areas as it can be easily mistaken for cirrhosis of the liver and will be missed unless appropriate venography is performed. The reason that these cases of membranous vena cava disease have a high incidence of hepatocellular carcinoma is unknown. It is suggested that there is an increased number of injured liver cells in this disorder; the cells die and have to be replaced frequently; this, in turn, might act as a stimulus to cancer formation. The hepatitis B viruses might play a role in cancer formation in these cases, but many of the cases of carcinoma do not seemingly have the stigmata of hepatitis B infection.

Progress in the treatment of disease sometimes results in marked improvement in one area—and some adverse effects in another area. The trade off has to be measured by the clinician and determined whether the treatment justifies the side effects. One somewhat unusual side effect in the treatment of kidney disease has been an unexpected finding in the liver of patients treated by hemodialysis. The authors Leong, Disney, and Gove published in the *New England Journal of Medicine* an article entitled "Spallation and Migration of Silicone from Blood-Pump Tubing in Patients on Hemodialysis" (Volume 306, page 135, January 21, 1982). The authors point out that liver problems are fairly common in patients with chronic kidney failure. Among the problems are infection with hepatitis B and cytomegalovirus, drug effects, etc. The above mentioned disorders usually cause an acute liver problem—and it is often a chronic liver problem. On the other hand, these disorders do not account for some of the cases of liver disease seen in cases on longterm hemodialysis. Leong is reported to have studied some liver biopsy samples from patients who were treated with hemodialysis and found some foreign material in the liver. It was in the mononuclear phagocytes and this led to a careful study to determine the nature of the material. It was subsequently found that the particles were vascular emboli and consisted of silicone from the blood pump tubing of the hemodialysis machine. Apparently these particles of silicone fragment from the tubing and enter the circulation of the patient. It is not a defect in the tubing but consists of spallation of the particles of silicone without any recognizable defect in the manufacture of the tubing. The silicone which spallates can cause a foreign body reaction. These are well known to cause inflammatory reactions in the breast. In these cases it was noted that it produced hepatic granulomas. Leong et al state that when silicone was found in the liver there was always some histologic abnormality visible. Other organs also contained silicone deposits which come from tubing; they are the spleen, lymph nodes, and bone marrow. The authors suggest that silicone not be used in the tubing of hemodialysis equipment.

Another trade off on the cost benefit ratio of the use of drugs and equipment in certain disease states is reported by Cabrera, Arroyo, Ballesta, Rimola, Gual, Elena, and Rodes in *Gastroenterology* (Volume 82, page 97, January, 1982) entitled "Aminoglycoside Nephrotoxicity in Cirrhosis". It is pointed out in this article that patients with cirrhosis frequently develop gram negative bacillary infections. The authors indicate that nephrotoxicity is likely to occur in advanced cirrhosis of the liver. They state that an elevation of the serum creatinine is one means of detecting nephrotoxicity. Another means is a rise in urinary Beta ^{2} microglobulins. The authors feel that previous papers which fail to indicate the danger of aminoglycoside nephrotoxicity in cirrhosis of the liver occurred because of a failure to look for parameters that indicated nephrotoxicity. It is of interest that the nephrotoxicity will occur using a normal amount of the drugs and in an unusual rise in the level of the aminoglycosides.

Another widely used substance which may induce toxic side effect is Vitamin A. Leo, Arai, Sato, and Lieber reported in *Gastroenterology* (Volume 82, page 194, February, 1982) that Vitamin A used in what is thought to be a normal amount can cause hepatotoxic effects in alco-

holics. This study used rats as subjects. They found that the liver of animals fed a normal controlled diet appeared normal. Livers of the animals fed normal amounts of Vitamin A with a normal diet plus ethanol showed some fatty changes. If large amounts of Vitamin A plus ethanol plus a normal diet were given, the liver showed rather market steatosis. Changes in the liver cells were noted by both light and electron microscopy. They conclude that ethanol greatly enhances the hepatotoxic effect of Vitamin A and further state that the amounts of Vitamin A which cause serious toxicity in the animals exposed to alcohol cause no apparent toxicity in normal animals. It would appear that the minimal daily dose of Vitamin A in patients with liver disease should be carefully reviewed. Leo mentions that some of the diseases in which large amounts of Vitamin A are used include cirrhosis, hypogonadism, poor dark adaptation, etc. The mechanism which brings about the potential for Vitamin A hepatotoxicity has not been established, the author stated. They do not feel that it is necessarily the concentration of Vitamin A in the liver. They suggest that some metabolite might be the etiologic agent. Leo reports that the GDH test rises quite regularly in experimental animals after use of ethanol and Vitamin A and he states that this probably represents mitochondrial injury. He suggests that the GDH test might be used to monitor patients who are on large doses of Vitamin A and are known to use ethanol.

These are but a few articles of interest appearing in ever increasing numbers on liver disease.

"From Other Years"*

Journal of the State Medical Society of Arkansas
Vol. 3 No. 9 15 March 1893 p. 400

A DRY TOWN

By a recent act of the General Assembly prohibiting the sale, barter, exchange or giving away of any vinous, spirituous or malt liquors within three miles of some school-house at Batesville that town has become, in the vernacular of the politician, a *dry* town. This information is early given because THE JOURNAL feels assured that such a state of affairs will in no way detract from the success of the medical gathering to be held there on May 31, 1893. The Batesville doctors are an ingenious set of scientists, and no doubt will provide for any individual emergency that may arise. Quite a number of physicians have been attending the assembling of State temperance associations, while ignoring the meetings of the Arkansas Medical Society. The meeting at Batesville will afford an excellent opportunity for forming a medical temperance society in affiliation with the American Medical Temperance Association, which is one of the wheels within the great wheel of the National Medical Association. Such an organization might do much good in this State.

Upper White River affords some of as pretty scenery as can be seen anywhere in the United States, and may be an entertainment *on water* will be provided for the visiting doctors.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives Division.

MEDICINE IN THE NEWS



MEDICINE IN ARKANSAS EXHIBIT TO OPEN

The Museum of Science and History, Little Rock, is soliciting artifacts for the exhibit MEDICINE IN ARKANSAS to open March 30, 1983. This exhibit, sponsored by St. Vincent Infirmary, will focus on medicine and how it was practiced in Arkansas from the mid-1800's through the 1920's. If you have artifacts you are willing to loan or information you feel should be included, please contact: Dr. Ralph A. Downs, Chairman,

Medical Advisory Committee. #1 St. Vincent Circle, Little Rock 72205, or Mr. Jerry Schulz, Director of Exhibits, Museum of Science and History, MacArthur Park, Little Rock.

* * * *

MINUTES OF STATE SOCIETY COUNCIL

The Council of the Arkansas Medical Society met at 10:00 a.m. on Sunday, November 14, 1982, in the Camelot Hotel, Little Rock. Members of the Council present were Burge, Henry, Crow, Shuffield, Wallick, J. Kolb, Smith, Osborne, Lawson, J. Bell, Lytle, Hestir, P. Bell, Langston, Sanders, Warren, Joyce, Armstrong, Bracken, Clardy, Jouett, Jones, Logan, Morgan, Pearson, Williams, Wilkins, Lilly, Saltzman, Applegate, P. Kolb, Ellis, Verser, Fowler, Kutait, Koenig, Townsend and Chudy. Others present were Robert Benafield, Milton Deneke, James Weber, George Mitchell, Thomas Bruce, Larry Wright, T. J. Smith, William C. Martin, Robert McCrary, Kelly Meyer, Edgar Easley, Mae Nettleship, Ramona Taylor, Joan Smith, Mr. Mitchell, Mr. LaMastus, Miss Richmond and C. C. Long.

The Council transacted business as follows:

1. Adopted a Memorial Resolution honoring L. A. Whittaker, who served for many years as a councilor and as president of the Society.
2. Heard a report from Larry Wright, chairman of the Ad Hoc Committee for Liaison with Social Services and the Health Department. Dr. Wright recommended that the Council go on record as opposing the further extension of the Long Term Care Demonstration Project and any plans for making the concept of mandatory assessment an integral part of the Long Term Care system in Arkansas. He also suggested that the committee continue meeting with the State agencies to monitor Long Term Care. The Council adopted the recommendations presented. Dr. Wright and his committee were thanked and commended for their work.
3. The Council approved action of the Executive Committee in its meeting on September 22, 1982.
4. The Council heard a report from Secretary Shuffield on a meeting October 27, 1982, with representatives of Beverly Enterprises. The Council voted to go on record as opposing that portion of the Beverly Enterprises' application which proposes that the firm be permitted to do its own peer review. The Council further voted to advise Carolyne Davis, of the Health Care Financing Administration, and the Arkansas Congressional delegation of the Council's action.
5. The Council voted to request input from interested groups, specifically Blue Cross-Blue Shield, who are willing to offer counterproposals, with input from the Medical Society, for an application for waiver for an alternative approach to Medicare competition.
6. The Council voted to suspend its rules to consider three items of business not on the published agenda.
7. Frank Morgan, chairman of the Nominating Committee, briefly discussed two sections of the Constitution and Bylaws which his committee felt should be reviewed. Under the new system of announcing the report of the Nominating Committee by February 1, the committee felt it would be unfair to prohibit proposed candidates from soliciting votes. The committee also felt that some exception should be made to the rule requiring attendance at the meeting at which the election is held. The Council voted to refer these items to the Constitutional Revisions Committee for drafting of proposed amendments.
8. W. Payton Kolb advised the Council that the Section on Psychiatry proposed submission of his name as a nominee for a position on the Council on Constitution and Bylaws of the American Medical Association. He requested endorsement and financial support of the Medical Society. The Council voted approval.
9. The Council voted to instruct the Society's delegates to the American Medical Association to support proposals for legislation to repeal Section 108 of the Tax Equity and Fiscal Responsibility Act of 1982 and to support efforts to allow judicial review of policies and regulations pertaining to Medicare reimbursement.

The Council met in executive session to consider additional items of business as follows:

1. T. E. Townsend, chairman of the Board of Trustees for the Pension Plan, reported to the Council.
 (A) The Council voted to approve the proposed plan for a "Money Purchase Pension Plan and Trust" (defined contribution plan) and to implement the plan prior to December 31, 1982.
 (B) Dr. Townsend advised the Council that three employees (Miss Richmond, Miss Thompson, and Mrs. Branham) have

been penalized by the distribution of funds, according to advisor and attorney. The Board of Trustees recommended that they not be penalized. The Council voted to permit the Board of Trustees to negotiate these differences and report back to the Council for final approval.

2. Rhys Williams, chairman of the Budget Committee, presented the proposed operating budget for the Society for 1983. The proposed budget was approved as presented. There was discussion of non-budgeted items, including (1) proposals before the American Medical Association to make the State Society president-elect a member of the AMA House of Delegates and to allow an additional AMA delegate to states with 75 percent of its members as AMA members and (2) financial support for Dr. Kolb's candidacy for an AMA Council position.

Approved: John P. Burge, M.D., Chairman

Report of Ad Hoc Committee For Liaison With Social Services and The Health Department

This committee was appointed in December 1981 and charged with the responsibility of meeting regularly with representatives of the Office on Aging, Social Services, and Arkansas Department of Health for the purpose of monitoring the progress of the Arkansas Long Term Care Demonstration Project (LTCDP). The following conclusions and recommendations are based on the evaluation of data provided from the first eight months of the project.

CONCLUSIONS:

1. Mandatory screening of all LTC applicants to determine appropriate LTC placement is not desirable. The LTCDP has failed to show any significant improvement in the appropriateness of selection of persons for the various alternative forms of LTC. In particular there has been no reduction in the number of persons placed in nursing homes in the two project areas during the study.
2. The cost of routine screening evaluating using an instrument such as the Client Assessment Teams (CAT's) is not justifiable.
3. The present system of physician-directed determination of need for various LTC services has demonstrated its effectiveness by comparison with the CAT-directed decision making tested by the LTCDP.
4. The most apparent deficiency in the present LTC system in Arkansas is the lack of sufficient alternative services, especially specific types of home health services in certain parts of the State and boarding home or "attendant-care" facilities in the State generally.
5. The LTCDP has served the beneficial purpose of generating a useful data base of information on health and social needs of this specific segment of the older population which was not previously available.

RECOMMENDATIONS:

1. The Council of the Arkansas Medical Society should go on record as opposing the further extension of the LTCDP and any plans for making the concept of mandatory assessment an integral part of the LTC system in Arkansas.

Memorial Resolution

WHEREAS, our beloved colleague and leader, Dr. L. A. Whittaker, was called to rest on November 7, 1982, and

WHEREAS, his life was dedicated to the purposes for which this Society was founded and he gave without stint of his effort, interest, and professional service, many times beyond the call of duty, and

WHEREAS, his philosophy of life was admirable, a unique asset to his personal character and to his profession, a philosophy which enabled him to move forward with undiminished fortitude and courage in the face of known adversity that would have halted a less resolute and dedicated man, and

WHEREAS, he played so eminent a role in the affairs of the medical profession of this State, having served as president of his county medical society, as president of the Arkansas Academy of Family Physicians, and as president of the Arkansas Medical Society, and

WHEREAS, his concern for the public and his profession resulted in many years of outstanding work in the field of general practice and in ten years of service as director of the county health department, and

WHEREAS, his undeviating loyalty and his love for his fellowman, and particularly those who came under his care, endeared him to all,

NOW, THEREFORE, BE IT RESOLVED that we, the Council of the Arkansas Medical Society, express to the family of Dr. Whittaker its

sense of loss upon the passing of our friend, and

BE IT FURTHER RESOLVED that this resolution be spread upon the minutes and published in the *Journal of the Arkansas Medical Society.*

ADOPTED: November 14, 1982
Council of the Arkansas Medical Society

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

PRACTICAL MANAGEMENT OF RHEUMATIC DISORDERS

Presented by Eleanor Lipsmeyer, M.D., and Fred Robertson, M.D., *March 3-5, 8:00 a.m. to 12:00 noon each day,* Arlington Hotel, Hot Springs. Sponsored by UAMS. Seven hours Category I credit. Registration fee: $75.

SLEEP PHYSIOLOGY AND MANAGEMENT OF SLEEP PROBLEMS

Presented by Edgar Lucas, Ph.D., and Virgil Wooten, M.D., *March 15, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

CARDIOVASCULAR RISK FACTORS IN HYPERTENSION

Presented by Norman Kaplan, M.D., *March 15, 10:00 a.m.,* Fourth Floor Conference Room, Sparks Regional Medical Center, Fort Smith. Sponsored by AHEC-Fort Smith. One hour Category I credit. No registration fee.

PSYCHIATRY FOR THE PRIMARY CARE PHYSICIAN

Presented by Ben Saltzman, M.D., *March 19, 8:00 a.m. to 4:45 p.m.,* UAMS Ed II Building. Seven hours Category I credit. Registration fee: $40.

ANNUAL SURGICAL SYMPOSIUM

Presented by Gilbert S. Campbell, M.D., *March 25-26, 8:00 a.m. to 12:00 noon,* Arlington Hotel, Hot Springs. Sponsored by UAMS. Four hours Category I credit. Registration fee unknown at this time.

COMPLICATIONS OF UREMIA

Presented by Watson Arnold, M.D., *March 25-27, 8:00 a.m. to 12:30 p.m.,* Arlington Hotel, Hot Springs. Sponsored by UAMS. Four hours Category I credit. Registration fee: $50.

EVALUATION OF PUPILS

Presented by Jan Scruggs, M.D., *April 18, 7:00 p.m.,* Memorial Hospital, North Little Rock. One hour Category I credit. No registration fee.

SEXUAL DYSFUNCTION

Presented by Raymond Bauer, M.D., Associate Clinical Professor of Psychiatry, Tulane University School of Medicine, New Orleans, *April 20, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

SLEEP PROBLEMS

April 23, 8:00 a.m. to 12:30 p.m., Shuffield Auditorium, Baptist Medical Center. Four hours Category I credit. Registration fee: $40.

ANESTHESIA UPDATE

Presented by Richard Clark, M.D., *April 29-May 1, 8:00 a.m. to 12:00 noon,* Red Apple Inn, Heber Springs. Sponsored by UAMS. Five hours Category I credit. Registration fee: $40 ($20 for C.R.N.A.'s).

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, fourth Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second, and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.

As organizations accredited for continuing medical education by the Liaison Committee on Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association

Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, first and third Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and fourth Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, second and third Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-Northwest
Medicine Teaching Conference, March 5, 19, and April 2, 16, 30, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER
Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, March: Infectious Diseases, Robert Bradsher, M.D.; April: Renal, George Ackerman, M.D.

FORT SMITH — AHEC
Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-Northeast
Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Methodist Hospital of Jonesboro Cafeteria.
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL
Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, Burn Conference Room.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.
Primary Care Seminar, March 9, 23, and April 6, 20, 8:15 a.m., Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER
Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category 1 credit. (Pre-registration with Department of Medical Education required.)
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
General Internal Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.
Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY
Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m. In conjunction with Little Rock Gynecological Society meeting in March. St. Vincent Infirmary in April.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:00 p.m. to 6:00 p.m., Room S1169 Laboratory.
Nephrology Conference, third Wednesday, 7:30 a.m. to 8:30 a.m., Cafeteria Dining Room D.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA — AHEC-Southwest
AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.



PERSONAL AND NEWS ITEMS

DR. JACKS LOCATES

Dr. J. Warren Jacks has joined Dr. D. L. Cohagan at the Bentonville Medical Clinic for the General Practice of Medicine.

DR. DRAKE PERFORMS

Dr. James Drake of Jonesboro was guest recitalist for a concert at Brown Chapel of Arkansas College in Batesville. Dr. Drake performed "Prelude and Fugue in D Major" by Bach and "Cortege et Litanie" by Dupre.

DR. MORENO

Dr. Frank G. Moreno has opened an office at 620 West Walnut in Blytheville. Dr. Moreno specializes in Otolaryngology and facial plastic surgery.

DR. PATRICK

Dr. James K. Patrick of Fayetteville is working with the Home Health program at Fayetteville City Hospital to organize a Stroke Club for victims of stroke and their family members. Dr. Patrick and hospital personnel will provide sponsorship, program input, and professional help to the club.

DRS. SMITH AND GARDNER

Drs. J. Thomas Smith and Guy F. Gardner of Little Rock have opened an office at the Multispecialty Clinic in Conway. Their office will be open on the second and fourth Wednesday each month. Drs. Smith and Gardner specialize in Ear, Nose and Throat/Head, Neck and Maxillofacial Surgery.

PHYSICIANS PARTICIPATE

The Arkansas Family Practice Education Network, part of the Department of Family and Community Medicine at the University of Arkansas for Medical Sciences, held a management conference at the Medical Center in December. Participating in the program for young physicians beginning practices were Dr. Thomas Bruce, Medical School Dean; Dr. and Mrs. Bruce White of Malvern; and Dr. and Mrs. Drew Jansen of Pocahontas.

DR. JOYCE ON BOARD

Dr. F. E. Joyce of Texarkana has been elected to the Board of Directors of the State First National Bank of Texarkana.

DR. JAMES APPOINTED

Dr. William Joe James of Pine Bluff has been appointed by Governor White to the Statewide Health Coordinating Council.

DR. NASSRI SPEAKS

Dr. Louay Nassri of Fort Smith discussed "Upper Airway Obstruction" at the first annual meeting of the Regional Cystic Fibrosis Center in Shreveport, Louisiana.

MEDICINE SEMINAR

Drs. John Shock and Frederick Levin of Little Rock participated in a seminar entitled "Medicine: Trends and Issues" for junior high gifted and talented students of the North Little Rock public schools.

DR. CRAVENES LOCATES

Dr. Betsey Cravenes of McCrory has opened an office in Cotton Plant for the General Practice of Medicine.

DR. DENNIS HONORED

Dr. James Dennis of Little Rock was recently honored by the Pulaski County Council on Aging for his leadership and dedicated service to the Council.

DR. WOOD RETIRES

Dr. John P. Wood of Mena has announced his retirement from the practice of medicine.

DR. WILLS APPOINTED

Dr. Paul Wills of Fort Smith has been appointed to the Board of Governors of the American Academy of Otolaryngology-Head and Neck Surgery.

PHYSICIANS ELECTED

Dr. Hugh R. Edwards has been elected 1983 Chief of Staff at Central Arkansas General Hospital at Searcy. Dr. Porter R. Rodgers, Jr., is the vice chief of staff and Dr. Larry R. Killough is secretary. Outgoing officers are Drs. Larry W. Weathers and Glen T. Blue.

DR. BURKS RECEIVES MEDAL

Dr. Willard Burks of Wynne is one of three Generals of the Arkansas Guard to be awarded the Arkansas Commendation Medal for meritorious service during 1982.

PHYSICIANS PARTICIPATE IN SEMINAR

The Saline Memorial Hospital is sponsoring a series of seminars entitled, "Emergency Nursing: Assessment Skills and Nursing Interventions" designed to cover subject areas included in the Certified Emergency Nurse Exam. To date, lectures have been given by Drs. John D. Wright, Donald L. Viner, Ted Hood, J. Shelby Duncan, Ralph Cash and Sam Taggart of Benton and Dr. Charles Logan of Little Rock.

DR. LOMBARDO GIVES PARTY

Dr. Richard Lombardo of Pocahontas gave a Christmas party for children he has delivered since beginning his practice.

DR. FERRIS

Dr. Ernest J. Ferris of Little Rock reported on current research at the 68th Scientific Assembly of the Radiological Society of North America.

DR. LOWE ELECTED

Dr. Betty Lowe of Little Rock has been elected alternate district chairman for Region VII of the American Academy of Pediatrics. Dr. Lowe is the first Arkansas physician to represent the six-state region on the Academy national committees.

DR. HENKER ELECTED

Dr. Fred Henker of Little Rock is the newly-elected president of The Academy of Psychosomatic Medicine, a national organization.

Dr. Henker was also elected chairman-elect for the Section on Psychiatry, Neurology and Neurosurgery of the Southern Medical Association at the recent annual meeting.

DR. GLASSELL LOCATES

Dr. Edwin Glassell has joined Holt Krock Clinic in Fort Smith for the practice of Internal Medicine .

DR. CRAWLEY CHIEF

Dr. Michael Crawley of Jonesboro is chief of staff at Methodist Hospital in Jonesboro. Other officers are: Dr. D. J. Kroe, vice chief of staff; Dr. E. Paul Reid, secretary; Dr. Robert Lassonde, chief of surgery; Dr. Robert Cohen, chief of medicine; Dr. Michael Tedder, chief of obstetrics; and Dr. J. M. Robinette, chief of family practice. All are from Jonesboro.

DR. MILLER ON BOARD

Dr. Raymond P. Miller, Sr., of Little Rock has been appointed to the Board of Arkansas Power and Light Company.

OPEN HOUSE

Drs. C. Herbert Taylor and Jacinto Hernandez of West Memphis hosted an open house at the Crittenden Memorial Hospital Hemodialysis Department. New dialysis machines were on display and hospital staff members guided tours of the department and answered questions from the public.

DR. WEATHERS APPOINTED

Dr. Larry Weathers of Searcy has been appointed chairman of the Sub-Committee for Special Fundraising Events in 1983 for the Arkansas Chapter of the American Heart Association.

DR. MALAK SPEAKS

Dr. Fahmy Malak of Little Rock recently participated in the program of a training seminar for county coroners.

DR. KEISKER CHIEF

Dr. H. W. Keisker of Jonesboro is 1983 chief of staff at St. Bernard's Regional Medical Center. Other staff officers are: Dr. J. W. Sanders, vice chief of staff; Dr. R. W. Johnson, secretary-treasurer; Dr. R. A. Blair, chief of obstetrics; Dr. R. O. Lawrence, chief of medicine; Dr. L. J. Scriber, chief of surgery; members-at-large are Drs. A. C. Modelevsky and J. T. Wilson. All of the physicians practice in Jonesboro.

DR. DANG LOCATES

Dr. Ky D. Dang has opened an office at the East Family Health Center in Lepanto.

DR. KOENIG HONORED

Dr. A. S. "Bud" Koenig, Jr., of Fort Smith was honored with a retirement luncheon by Sparks Regional Medical Center. Dr. Koenig, who retired from practice the first of the year, has been associated with Sparks since 1946.

PHYSICIANS HONORED

Drs. Robert Shannon and Ben Saltzman were presented Distinguished Service Awards by the North Arkansas Human Services System, Inc.

TRUST FUND HONORS DR. WYATT

The Independence County Medical Society has established a Dr. Finis Q. Wyatt Scholarship Trust Fund. The fund will aid students pursuing careers in the field of medicine. Administrators of the trust are Drs. James Stalker and Charles Taylor of Batesville. Address for the Trust Fund is The Dr. F. Q. Wyatt Scholarship Trust Fund, First National Bank of Batesville, Post Office Box 2557, Batesville 72501.



NEW MEMBERS

The Benton County Medical Society has added two members to its roll:

DR. DANIEL E. CHRISTMAN

Dr. Christman, a native of Dermott, received his pre-med education at Arkansas A & M College in Monticello. He is a 1957 graduate of the University of Arkansas College of Medicine.

After an internship with Hillcrest Medical Center in Tulsa, Dr. Christman received his residency training at Lackland Air Force Base in San Antonio.

Dr. Christman was with Anesthesia Associates, Inc., in Tulsa from 1964 to 1980. From 1966 to 1980, he served as an Associate Professor of Anesthesiology at the University of Oklahoma College of Medicine. He moved to Rogers in 1980.

Dr. Christman specializes in Anesthesiology. His office is located at 604 North 13th in Rogers.

DR. ALBERT E. MARTIN

Dr. Martin was born in Coffeyville, Kansas. He received his pre-med education at Coffeyville Community College and Kansas University. He was graduated from the University of Kansas School of Medicine in 1937. Dr. Martin served his internship and residency at Huntington Memorial Hospital in Pasadena, California.

Dr. Martin's military record includes service with the Office for the Scientific Research and Development Rocket Project.

From 1939 to 1945, Dr. Martin practiced in Pasadena, California; and from 1945 to 1980, he practiced in Coffeyville, Kansas. He moved to Bella Vista in 1980.

Dr. Martin specializes in Family Practice. His office is located at 910 NW Seventh in Bentonville.

* * * *

The Jefferson County Medical Society has two new members:

DR. STEVEN BONNER

Dr. Bonner was born in Pasadena, California. He received a B.S. in Zoology in 1975 from Arkansas State University and was graduated from the University of Arkansas College of Medicine in 1979. His Family Practice residency was with the Area Health Education Center in Pine Bluff. He is a board certified Family Physician.

Since 1982, Dr. Bonner has held a teaching position with AHEC in Pine Bluff. He is currently serving as Assistant Professor. His mailing address is 1421 Cherry Street in Pine Bluff.

DR. LEE A. FORESTIERE

Dr. Forestiere, a native of New Orleans, received a B.S. degree from Tulane University in New Orleans in 1970. He was graduated from the University of Arkansas College of Medicine in 1974. Dr. Forestiere served a rotating internship with surgery major at the University.

From 1975 to 1977, Dr. Forestiere was a member of the United States Army Medical Corps. He returned to the University in 1977 for a General Surgery residency which he completed in 1981. Dr. Forestiere is a candidate of the American College of Surgery.

Dr. Forestiere moved to Pine Bluff in 1981. He serves as a clinical instructor of surgery with AHEC in Pine Bluff. Dr. Forestiere specializes in General, Thoracic and Vascular Surgery; his office is located at 1801 West 40th.

* * * *

Two physicians have joined the Sebastian County Medical Society:

DR. GILBERT JONES, III

Dr. Jones was born in Clarksville, Tennessee, and was graduated from the University of Tennessee at Martin in 1972. He is a 1975 graduate of the University of Tennessee Center for the Health Sciences. Dr. Jones served his internship and residency at LeBonheur Children's Hospital in Memphis. He practiced in Tennessee for three and one-half years before moving to Fort Smith.

Dr. Jones, a Pediatrician, is associated with Holt Krock Clinic at 1500 Dodson in Fort Smith.

DR. DOUGLAS W. PARKER, JR.

Dr. Parker, a native of Little Rock, is associated with the Holt Krock Clinic at 1500 Dodson in Fort Smith.

Dr. Parker is a 1971 graduate of Arkansas Tech University and a 1975 graduate of the University of Arkansas College of Medicine. His postgraduate training was in Dallas at Parkland Hospital, VA Medical Center, Baylor University Medical Center, and Texas Scottish Rite Hospital for Crippled Children.

Dr. Parker joined Holt Krock Clinic in 1981; his specialty is Orthopaedic Surgery.

* * * *

DR. JAMES S. LEWIS

Dr. Lewis, a new member of the White County Medical Society, specializes in Pediatrics and has his office at 1300 South Main in Searcy.

A native of Camden, Dr. Lewis was graduated from Ouachita Baptist University in 1965 and from the University of Arkansas College of Medicine in 1969.

After an internship with St. John's Hospital in Tulsa, Dr. Lewis served with the United States Air Force for two years. He received residency training at Tulsa Pediatric Education Trust.

Dr. Lewis practiced with the Children's Clinic of Tulsa for nine years. From 1977 to 1982, he served as Director of Pediatric Intensive Care at St. Francis Hospital in Tulsa. While in Tulsa, he also served as Clinical Professor of Pediatrics with the University of Oklahoma Medical School at Tulsa.

RESIDENT MEMBERS

DR. E. SCOTT FERGUSON

Dr. Ferguson, a native of Memphis, is a resident member of the Crittenden County Medical Society.

He received his medical degree from the American University of Caribbean in Plymouth, Monteserrat, in 1981. After an internship with Lloyd Noland Hospital in Birmingham, Alabama, he returned to Memphis where he is currently serving a Radiology residency.

OBITUARY

DR. JOHN V. BUSBY

Dr. Busby of Little Rock died December 28, 1982. He was born May 6, 1927, in Little Rock.

Dr. Busby was a graduate of St. Louis University and St. Louis University School of Medicine. His internship was with St. John's Hospital in St. Louis and his residency was with the Arkansas University Hospital.

Dr. Busby practiced in Little Rock from 1955 until his retirement in 1981. He had served on the psychiatric staffs of St. Vincent Infirmary, Baptist Medical Center and the University of Arkansas College of Medicine.

He is survived by his wife, Nancy Hoag Busby, three sons, two daughters, two stepsons and two stepdaughters.

DR. MICHAEL N. HARRIS

Dr. Harris died January 4, 1983. He was born August 13, 1931, in Helena.

Dr. Harris practiced Internal Medicine and Rheumatology in Little Rock from 1966 until his death.

In 1953, he was graduated from Arkansas State Teachers College in Conway. He received a Master of Science degree from the University of Arkansas at Fayetteville in 1956. His medical degree was from the University of Arkansas College of Medicine in 1960. After an internship with Baptist Memorial Hospital in Memphis, Dr. Harris practiced General Medicine in Morrilton until 1963. He returned to Memphis for residency training in Internal Medicine and Rheumatology. Upon completion of his residency training, he located in Little Rock. Dr. Harris had served as a Clinical Instructor in Internal Medicine and Rheumatology at the University and was on the staffs of Baptist Medical Center, St. Vincent Infirmary and Memorial Hospital in North Little Rock.

Dr. Harris is survived by his wife, Janice McDaniel Harris, one son and two daughters.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The patient's electrocardiagram reveals premature atrial cantractians which are in a bigeminal pattern (atrial bigeminy). Atrial premature beats are cammanly seen in anxiaus, fatigued peaple with atherwise narmal hearts. The ectapic beats may be caused by tabacca, caffine, ethanal, ar by drugs such as digitalis. Cangestive heart failure, atrial enlargement ar distentian, atrial infarctian ar ischemia, and hypaxia may all be assaciated with atrial premature cantractians. One wauld direct treatment taward atrial premature beats anly if they are assaciated with significant symptams ar if they relate ta sustained atrial tachyarrhythmias, thaught ta be af patential danger ta the patient.

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March, 1983

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Vol. 79 No. 10

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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to this membership.

SCIENTIFIC ARTICLES

Caustic Injuries of the Esophagus ... 341
E. S. Golladay, M.D., and Daniel L. Mollitt, M.D.

Goldmann Perimetry Versus Tangent Screen: The Difference in 104 V.A. Hospital Glaucoma Patients/Suspects ... 344
Alan H. Zalta, M.D., and John P. Shock, M.D.

FEATURES

ECG of the Month ... 347
John W. Watson, M.D.

Office Orthopaedics: "Hip Pain" ... 348
Philip H. Johnson, M.D.

Editorial: "Goldberg's Discussion on Interstitial Nephritis" ... 351
Alfred Kahn, Jr., M.D.

From Other Years: "County Societies" ... 352

Medicine in the News ... 353

Keeping Up ... 356

Personal and News Items ... 358

New Members ... 360

Obituaries ... 361

Things to Come ... 362

Resolutions ... 363

Announcements ... 363

Woman's Auxiliary ... 364

Convention Program Section ... 367

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Caustic Injuries of the Esophagus

E. S. Golladay, M.D., and Daniel L. Mollitt, M.D.*

Exploration by young boys and suicidal attempts by adolescent girls constitute the predominant source of the annual 5000 cases of corrosive ingestion in children in this country.[1,2] The problem continues because legislative attempts to make packages with safety caps or warnings do not protect against the inquisitive toddler nor the determined adolescent. Parental disregard for the maintenance of a proper container is highly contributory to toddler ingestions and public education needs to continue in that regard. Strong alkalis packaged as oven cleaners and drain cleaners are most often responsible for the severe esophageal injury,[3] but ammonia, wax matrix potassium chloride, bleach, nonphosphate detergents, clinitest tablets, batteries, and sodium carbonate have injured the esophagus. Acid products such as swimming pool cleaners, denture cleaners and toilet bowl cleaners also cause damage.

The severity of the burn is dictated by the agent, its concentration, the volume, the duration of contact and the postprandial state of the stomach; this information as well as previous treatment or vomiting should be carefully sought in the history. An irrefutable history of ingestion is not necessary — presumptive evidence supplied by an opened, spilled container should warrant full investigation. Drooling, dysphagia, refusal to eat or drink, burns about the face or on the neck, chest, or hands are commonly found. Hoarseness, dyspnea, or stridor indicate edema of the laryngeal inlet and possible aspiration. Close examination for the substernal, back or abdominal pain or tenderness which heralds perforation is essential.

If any of these signs or symptoms are present, the patient should be placed NPO, an intravenous line started, blood count, urinalysis, chest roentgenogram, and type and cross match obtained.

Most young children who ingest caustic solutions immediately regurgitate therefore leaving insignificant gastric residual. Induced emesis is never indicated as it may compound the injury. With liquid caustics or suicidal attempts, cautious passage of a small caliber nasogastric tube for assessment of intragastric PH is in order.[4] Laparotomy for assessment of gastric necrosis, possible gastric resection, esophagectomy, or placement of a gastrostomy if less serious damage is present, appears to be indicated if there is a persistent alkaline aspirate. Solid caustics and acids may warrant aspiration of residual gastric content and subsequent dilutional lavage,[5,6] but antidotes evoke exothermic reactions and are not to be used.

An esophagram should be obtained and if positive, the patient should be placed on prednisone 5 mg/kg. If there are signs of perforation, shock, infection, an ulcer history, or if the ingestion occurred more than 48 hours prior to initiation of treatment, steroids should be withheld. Antibiotic coverage during the time of steroid administration appears warranted.[7]

Esophagrams do not accurately delineate damage,[8] as severe esophageal dysfunction occurs without stricture. If no changes are found on esophagram, esophagoscopy should be performed unless the patient has impending airway obstruction and requires tracheostomy.

Some authors advocate full endoscopy,[9] but have caused fatal perforations in doing so. Unless the instrument is passed beyond an obvious burn, there is negligible risk of perforation. Seventy percent of suspected caustic ingestions may not have burns.[10] Oropharyngeal burns are absent in 15 percent of patients with esophageal burns.[11] Twenty percent of alkaline esophageal burns have gastric injury and 20 percent of acid ingestions have esophageal burns.[12] Assessment of the burn at endoscopy is difficult since the distal esophagus is never visualized. In addition, full thickness burns do not always lead to stricture.[13]

If no injury is found, the antibiotics and ste-

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roids are discontinued and the patient is reassessed at a one month interval. If no symptoms are suggestive of esophageal damage, the patient is instructed to return if symptoms subsequently arise. Symptoms warrant esophagoscopy and possible dilation.

When an alkaline esophageal burn is found, prednisone is given (5 mg/kg the first week, 3 mg/kg the second week and 2 mg/kg the third week). Nutritional support is essential in children without dysphagia and oral feedings should be instituted early to benefit from the self-bougienage of swallowed food. A severe lengthy burn should warrant strong consideration of an intraluminal stent,[14] although a residual rigid tube the size of the stent may result.[15]

Healing of a caustic burn occurs as follows:[16] 1) acute necrosis and inflammation from 1 to 4 days, 2) ulceration, neovascularization, and fibroblast proliferation for 5 to 14 days, 3) cicatrization, stricture formation and reepithelialization for 15 to 90 days. The long-term disability is a resultant of this scar formation and most likely to be found at the site of an anatomic narrowing. The inflammatory response and subsequent fibroplasia is decreased by the use of steroids within the first 48 hours.[17] Steroid use appears to be effective,[18,19] but stricture will result from caustic ingestion despite the outlined therapy in 10 percent of cases.

Periodic retrograde esophageal dilation is, therefore, sometimes required. When gastrostomy is performed, the tube should be placed at the confluence of the right and left gastroepiploic vessels and positioned well away from the costal margin. An internalized retrieval line using a 6 French silastic tubing can then be positioned.[20] Intralesional triamcinolone injection may be effective in the treatment of the short refractory stricture.[21] Dilation should be guided between sessions by patient response. Intraoperatively, difficulty in drawing the dilator through the stricture or the presence of blood on the dilator demand proper caution. Prophylactic intraoperative antibiotics may be indicated.[22] Dilation necessary for more than a year may require resection and anastomosis,[23] or some form of esophageal bypass. A gastric tube, pharyngogastrostomy, free jejunal graft, or colon may be used to bypass the damaged esophagus.

Coughing, choking, or food in tracheal secretions (especially when a nasogastric tube or stent lies in the esophagus adjacent to a tracheostomy tube) signal the need for radiologic investigation of a possible tracheoesophageal fistula.[24] Management includes division of the cervical esophagus, division of the abdominal esophagus, and a gastrostomy. Erosion into the aorta has also occurred.[25]

Acid burns of the esophagus produce a coagulation necrosis which impedes further penetration, and, thereby, induces concentrates in the antrum with resultant pylorospasm. Injury beyond the stomach is thus unusual,[12] but late pyloric stenosis occurs.[26] Partial gastric resection and gastroduodenostomy or gastrojejunostomy may be necessary.[27] Vagotomy should probably be included although achlorhydria is quite common.[28]

The esophagus may shorten and render the lower esophageal sphincter ineffective, thus predisposing to reflux ulceration.

Malignant change occurs up to 40 years after caustic ingestion and may cause inability to dilate a chronic stricture or progressive stenosis on esophagrams.[29] Biopsy is inconclusive, and, therefore, resection is indicated with those presentations. The prognosis is better than esophageal carcinoma in general, and although this scar carcinoma is unusual, blunt mediastinal esophagectomy with simultaneous colon interposition appears useful if esophageal replacement is required.[30]

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Goldmann Perimetry Versus Tangent Screen: The Difference in 104 V.A. Hospital Glaucoma Patients/Suspects

Alan H. Zalta, M.D., and John P. Shock, M.D.*

Abstract

104 patients (200 eyes), composed of 47 ocular hypertensives, 35 glaucoma suspects, and 22 patients with either primary open angle or secondary glaucoma, were examined by manual Goldmann perimetry using the Armaly-Drance technique for glaucoma screening. These Goldmann visual fields were compared to previously performed tangent screens using the Berens 3 mm white bead which is the traditional glaucoma screening technique at the Little Rock V. A. Hospital. All 104 patients were found to have classic nerve fiber bundle defects using Goldmann perimetry. In contrast, none had classical glaucomatous visual field defects using the Berens 3 mm white bead on tangent screen. Consequently, diagnoses were changed in 77 patients, and treatment initiated in 55 patients. This study clearly demonstrates that while the 3 mm white bead can detect and follow moderate to severe glaucomatous visual field damage, it is not sensitive enough to be used as a glaucoma screening device.

Introduction

In the last decade, threshold and suprathreshold static perimetry have become increasingly popular for glaucoma visual field screening, primarily due to the introduction of automated and semiautomated perimeters. Yet because of cost, speed, and recognizable isopter patterns, kinetic visual field testing still handles the bulk of glaucoma screening. The controversy of perimetry versus tangent screen for kinetic visual field testing has existed since the early 1900's. This study compares the accepted standard of Goldmann perimetry using the Armaly-Drance glaucoma screening technique to the tangent screen using a Berens 3 mm white bead which is the traditional glaucoma screening technique at the Little Rock V. A. Hospital Eye Clinic.

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Materials and Methods

The following criteria were established for inclusion in this study. The selected subjects belonged to one of the following diagnostic categories: glaucoma suspect, ocular hypertension, and primary open angle or secondary glaucoma. On chart review, none had evidence of classical glaucomatous visual field loss in at least one eye.

One hundred and four (104) patients (200 eyes) fulfilled the aforementioned diagnostic and visual field criteria. The patients' ages ranged from 28 to 88, with a mean of 58 years. Seventy-six percent of patients were white and 24% were black. All but one were male. Eighteen percent of patients had a positive family history of glaucoma. The mean cup/disc ratio of all patients at the time of perimetric visual fields was 0.59.

The mean length of time each patient had been followed in the Eye Clinic was 39.2 months. Twenty-nine patients had been followed for greater than five years, 10 patients for greater than nine years, and the longest for 15 years 10 months.

The perimetric method used was the basic Armaly-Drance technique[1] for glaucoma screening. This technique combines central and peripheral kinetic plotting with static suprathreshold spot checking. A minimum of 76 static spots were performed within the central 20°. The manual projection Goldmann perimeter used was a Topcon Model SBP-11.

Results

On chart review, the 104 patients had received a total of 330 tangent screens. Of these, 306 were normal and 24 were equivocal (i.e., nonspecific peripheral constriction or nonspecific blind spot enlargement). Ninety-five percent of the tangent screens had been performed using a Berens 3 mm white bead. The remaining 5% of tangent screens were performed with either the 1 or 2 mm Berens white bead.

In marked contrast, classic nerve fiber bundle defects were found in the same 104 patients using

Goldmann perimetry. The 12e target was positive in 60%, and 13e in 70% of patients.

The most common visual field defect on Goldmann perimetry was the isolated paracentral scotoma found in 90% of eyes. The next most common defects were the Seidel scotoma (51%), nonspecific peripheral constriction (48%), arcuate scotoma (38%), and nonspecific enlargement of the blind spot (32%). A Bjerrum's scotoma was found in 21%, and a nasal step in 17% of eyes. A temporal step was found in only 7% of eyes.

Discussion

The basic Armaly-Drance technique is an accurate and rapid method for determining whether or not a glaucomatous visual field defect is present. Prior to testing with Goldmann perimetry, the distribution of patient diagnoses in this study was as follows: 47 ocular hypertensives, 34 glaucoma suspects, 18 patients with open angle glaucoma, three with mixed glaucoma, one with pigmentary glaucoma, and one with pseudoexfoliation syndrome. Even though 22 patients had the diagnosis of some form of glaucoma, none of them had classic glaucomatous visual field loss on tangent screen. This study using Goldmann perimetry dramatically altered the distribution of patient diagnoses (see Table 1). Now there were no ocular hypertensives, only three glaucoma suspects, 86 patients with open angle glaucoma, six with low tension glaucoma, four with mixed glaucoma, one with secondary glaucoma, one with pigmentary glaucoma, one with pseudoexfoliation glaucoma, and two with nerve fiber bundle defects of unknown etiology.

Forty-four patients with no evidence of glaucomatous visual field loss on tangent screen were being treated with ocular hypotensives (see Table 2) prior to Goldmann perimetry. In 39 of these 44 patients, or 89%, treatment was initiated because of significantly elevated intraocular pressures, with a mean of 31 mm Hg. Other justification for ocular hypotensive therapy included a past ocular history of glaucoma prior to coming to the V. A. Hospital (9%), a large cup/disc ratio (5%), open angle glaucoma in the other eye (5%), and equivocal visual field (2%).

After Goldmann perimetry, 99 of the 104 patients were on ocular hypotensive therapy. Three patients are still being followed as glaucoma suspects and two as nerve fiber bundle defects of unknown etiology.

The distribution of glaucomatous visual field defects at the time of initial detection in this study are consistent with previously published reports.[2-4] Armaly[2] found an 89% incidence of paracentral scotomas which is equivalent to our finding of 90%. Aulhorn and Harms[3] documented a 38% incidence of nonspecific peripheral constriction in contrast to our finding of 48%. Further, the frequency of nasal steps and temporal steps in our series compared favorably with that of Morin[4] (i.e., 17 vs 14 and 7 vs 3 respectively).

Because of the high incidence of paracentral scotomas, static spot checking represents the single most important component of the glaucoma screen. Since it is virtually impossible to introduce the Berens beads into the visual field unseen, static spot-checking is eliminated as a viable option (see Table 3). Furthermore, the standard stimulus on perimetry for both static spot checking and central kinetic plotting is the 12e which has a 1 mm target equivalence on tangent screen.[1] In contrast, the 3 mm bead is equivalent to the 14w target and evaluates an isopter more than 50% of the way down the island hill of vision.[1] Clearly, the size of the bead, i.e., 3 mm, precludes

Table 1.
Patient Diagnoses Pre- and Post-Goldmann Perimetry

	No. Pre-	*No. Post-*
Ocular Hypertension	47	0
Glaucoma Suspect	34	3
Open-Angle Glaucoma	18	86
Low Tension Glaucoma	0	6
Mixed Glaucoma	3	4
Secondary Glaucoma	0	1
Pigmentary Glaucoma	1	1
Pseudoexfoliation	1	1
Nerve Fiber Bundle Defect	0	2

Table 2.
Ocular Hypotensive Therapy Pre- and Post-Goldmann Perimetry

	No. Pre-	*No. Post-*
Treated	44	99
Untreated	60	5

Table 3.
Comparison of Goldmann Perimetry and 3 mm Berens Bead Technique

	Static Spot Checking	*Target Size Equivalence*
Goldmann Perimetry	Present	12e = 1 mm
Berens Beads	Absent	14e = 3 mm

the demonstration of shallow, early glaucomatous damage. Keeping these two drawbacks in mind, it is easy to understand why the Berens 3 mm white bead will demonstrate visual field loss in the Little Rock V. A. Hospital Eye Clinic only when the cup/disc ratio reaches or exceeds 75 to 80%. Thus, while the 3 mm white bead can detect and follow moderate to severe glaucomatous visual field damage, it is not sensitive enough to be used as a glaucoma screening device.

The Little Rock V. A. Hospital Eye Clinic has an extensive glaucoma population which precludes the manpower time required to perform manual Goldmann perimetry using the Armaly-Drance technique on all patients. However, use of a 1 or 2 mm Lumiwand as standard operating procedure for glaucoma screening is an acceptable alternative and has been instituted. The smaller target size and static spot checking ability of the Lumiwand eliminate the inherent drawbacks of a 3 mm white bead. Another practical approach is to use an automated perimeter; the purchase of a Dicon Auto Perimeter 2000 has already been requested. Certainly, manual Goldmann perimetry can be reserved and should be used for those patients who are glaucoma suspects or ocular hypertensives with a high degree of suspicion but with normal visual fields by other methods.

Summary/Conclusion

At the Little Rock V. A. Hospital Eye Clinic, 104 glaucoma patients and suspects were evaluated with Goldmann perimetry and their charts reviewed. They had previously received 306 normal tangent screens using a Berens 3 mm white bead. All were found to have classic nerve fiber bundle defects on Goldmann perimetry using the Armaly-Drance technique for glaucoma screening. Diagnoses were changed in 77 patients, and treatment initiated in 55 patients.

In conclusion, this study clearly demonstrates that the Berens 3 mm white bead lacks adequate sensitivity for glaucoma screening.

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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See **Answer on Page 364**)

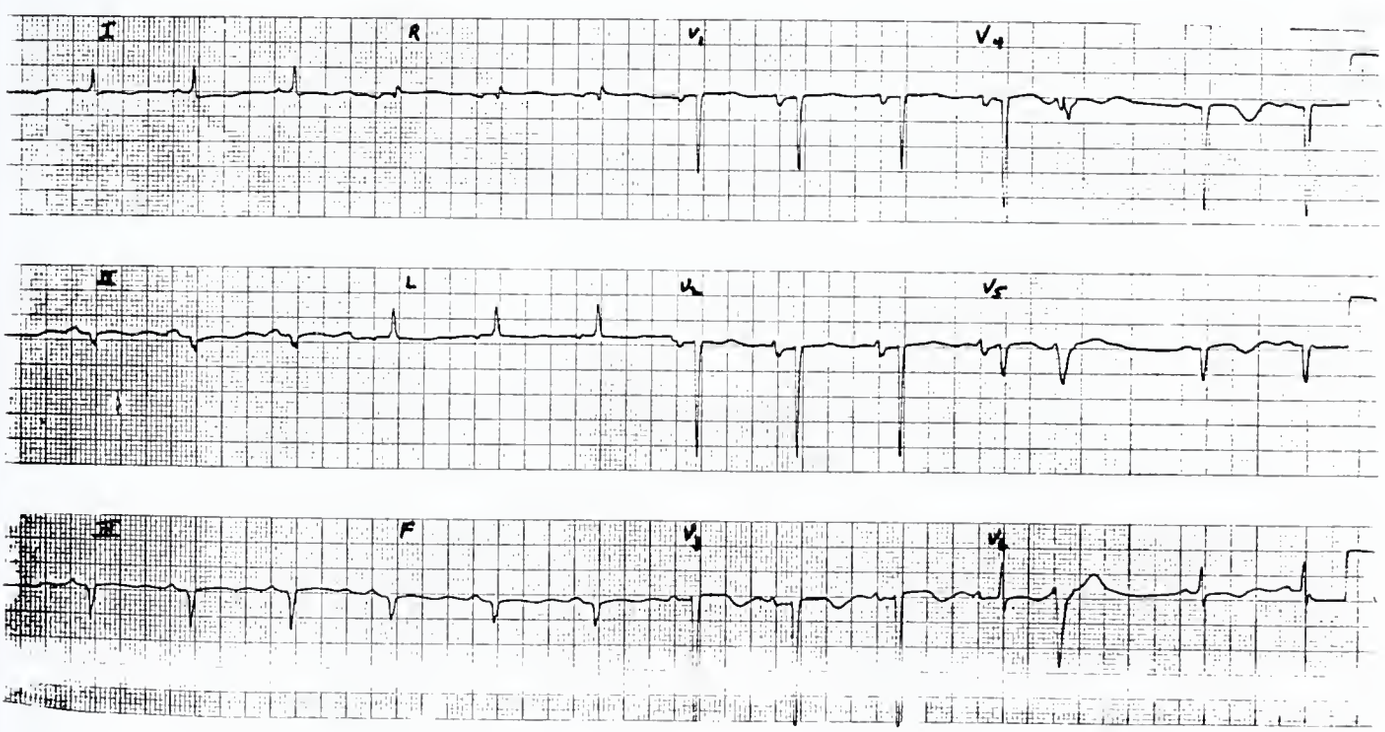
HISTORY: J. B. is a 46-year-old male smoker who has been presented because of a prolonged episode of chest pain. He indicates that he has had two "heart attacks" in the past. Current medications include quinidine and nitrates. On physical examination, the patient was found to have rales, an S_3 gallop, and a soft murmur of mitral regurgitation. His electrocardiogram is shown below. Based upon the information available, which of the following remarks are true and which are false:

A. Evidence electrocardiographically is lacking for acute infarction, so it can safely be assumed that he presently only has angina.

B. There is evidence for ischemic heart disease on his trace.

C. He has no evidence on his trace that quinidine is being taken.

D. Rheumatic heart disease is clearly the etiology of his congestive failure.



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Office Orthopaedics

"Hip Pain"

Philip H. Johnson, M.D.*

This paper will describe the usual patterns of hip pain and classify them as to location and etiology. I hope this will organize the subject and help lead to a clearer understanding.

Anterior Hip Pain can be thought of as originating from the hip joint (Figure 1). Any pathology within the joint itself usually produces pain anteriorly, in the groin, and depending on its severity may radiate from the adductor region of the thigh into the knee. The most common joint condition in the elderly is osteoarthritis. This, however, may occur earlier in life if trauma or pre-existing disease has set the stage. Other causes for synovitis of the joint, such as infection, avascular necrosis, sickle cell disease, hemophilia, stress fractures, etc., likewise produce pain which is perceived anteriorly in the groin, and which may radiate to the knee. A classic example of pain radiation is the adolescent male with slipped capital femoral epiphysis that presents initially with knee pain and limp. Perthes disease, another condition of childhood, results from avascular necrosis of the femoral head and produces pain anteriorly, limp, and restriction of hip motion. Depending on the extent of pathology, the range of motion in the hip is usually compromised. Even the mildest synovitis produces limitation of hip extension, a key physical finding in localizing the disease to the joint. Rotation of the hip may later be affected as the synovitis progresses. Finally, flexion may be restricted in the end stage of disease. Limp characteristically accompanies joint disease and is of the antalgic type. Every time the patient transfers weight to the involved hip he grimaces with pain, and lurches to this side.

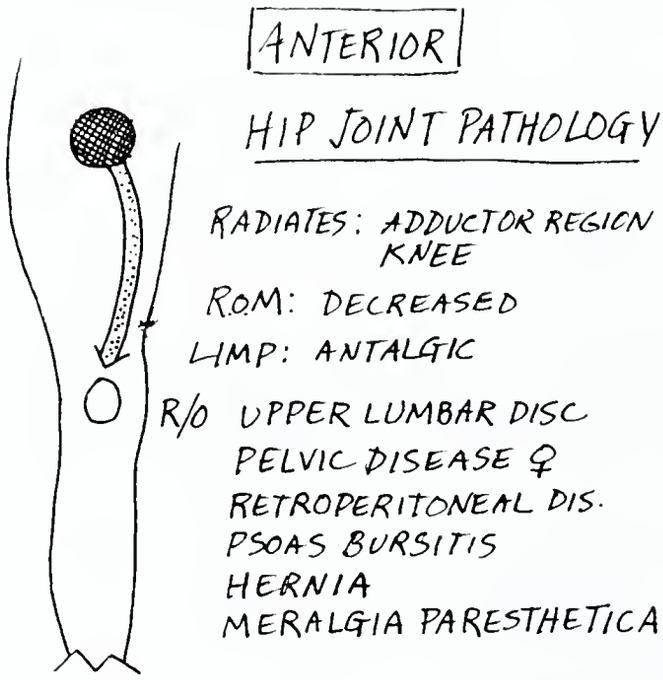


FIG. 1

In summary, any disease process within the hip joint produces a groin pain which, if severe enough, can radiate down the medial aspect of the thigh into the knee.

The following must be considered and ruled out with anterior hip pain. Upper lumbar intervertebral disc herniation (L3,4 or above) can produce anterior hip pain, psoas spasm, numbness in the femoral nerve distribution and absent knee jerk. In a similar fashion any retroperitoneal tumor or infection can irritate and/or compromise femoral nerve function and produce psoas spasm. Lymphoma, inflamed retroperitoneal appendix and psoas abscess from tuberculous spondylitis fall into this category. Pelvic disease

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in the female (PID, ovarian tumors and cysts, etc.) likewise may cause psoas spasm with limited hip extension and pain referred to the anterior hip. Inguinal or femoral hernias produce groin pain but should be associated with a palpable mass. The psoas (iliopectineal) bursa lies between the psoas muscle and anterior hip capusle and frequently communicates with the joint. When inflamed it produces pain and exquisite tenderness and may mimic intra-articular pathology. Meralgia Paresthetica is an entrapment of the lateral femoral cutaneous nerve passing under the inguinal ligament. Pain and paresthesias over the anterior and lateral thigh are present. Numbness over the distribution of this sensory nerve confirms the diagnosis.

Lateral Hip Pain usually means trochanteric bursitis (Figure 2). A bursa is present at the osseous insertion of the gluteus maximus posteriorly and laterally on the greater trochanter. Inflammation of this bursa is a common occurring condition and analogous to bursitis in the shoulder. A continuous aching pain over the lateral hip radiates down the lateral thigh to the knee. Exquisite tenderness over the bursa is present. Usually passive range of motion is normal though flexion and internal rotation stretches the tendon and intensifies the pain. Usually no limp or Trendelenburg's sign is seen. This condition usually responds to injection of steroids into the bursa, an easily accomplished office procedure.

"Snapping hip" is usually a painless condition, characterized by the iliotibial band popping over the prominence of the greater trochanter. Pain becomes a problem when chronic irritation produces inflammation and edema of the involved tissues. This audible and palpable snapping can be demonstrated by the patient.

Posterior Hip Pain is usually discogenic in origin (Figure 3). Pain originates from compression of either the L5 or S1 nerve root from a bulging intervertebral disc at the last two levels. Referred pain usually is felt first in the area of the buttock. From there it may radiate down the leg into the calf as "sciatica" (posteriorly for the L5-S1 and postero-laterally for the L4-5 disc). Range of motion of the hip is normal with the knee flexed. However, with the knee extended, straight leg raising and Lasegue's signs may be positive. Limp when present is secondary to lumbar muscle spasm producing "list" of the spine. Numbness and/or weakness in the foot may be present. Tenderness is usually present over the sciatic nerve emerging from the sciatic notch as well as adjacent to the spinous process at the involved level of the spine. It is commonly known that aching pain in the gluteal area after long periods of riding in an automobile or sitting in a soft chair may represent referred discogenic pain from the low back even though no physical findings for herniated disc are present.

Spondylolisthesis and other spondylogenic conditions frequently produce referred pain to the posterior hip. Pain is usually more intense, in the low back than in the hip and is frequently

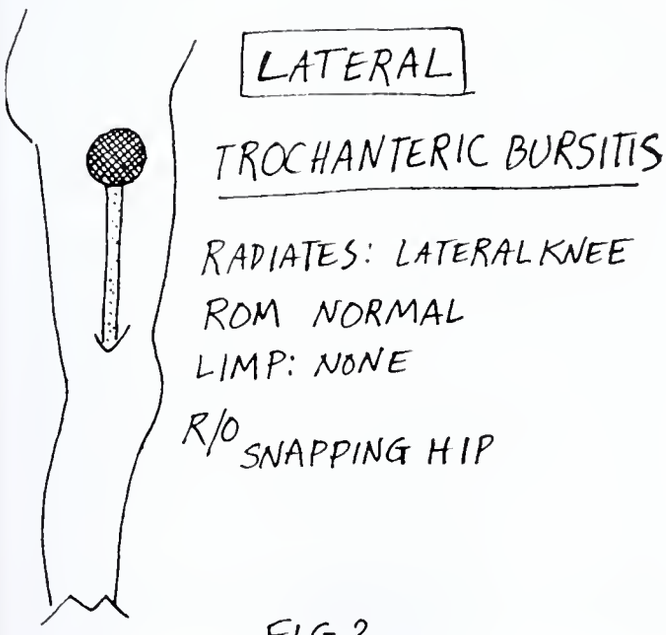


FIG. 2

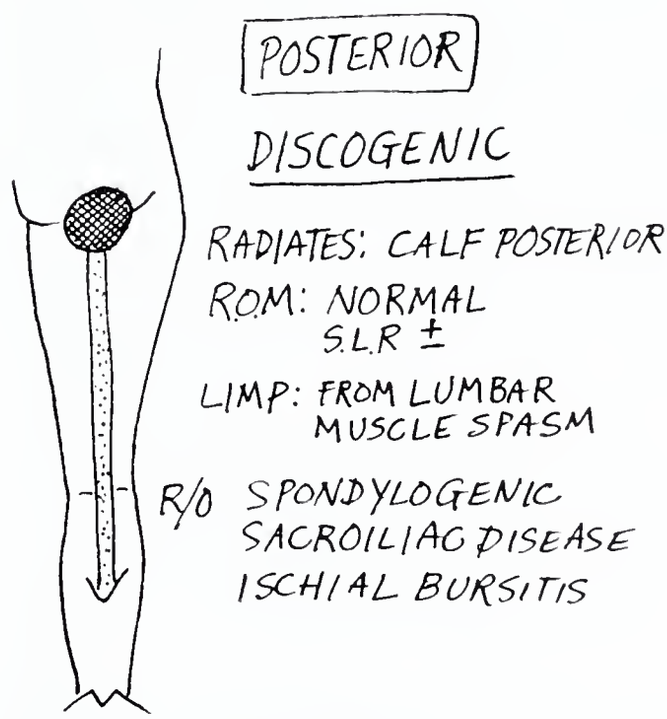


FIG. 3

referred to both buttocks. Lumbar muscle spasm with restriction of spinal motion is usually prominent.

Sacroiliac joint disease is extremely difficult to differentiate from discogenic pain. Before Mixter and Barr described the ruptured intervertebral disc in 1934 most pain syndromes we now consider to be originating from the low back were thought to be sacroiliac in origin. Sacroiliac disease does produce local pain, and tenderness may be elicited directly over the joint. There is a notable absence of true sciatica and signs of radiculopathy, even though pain may radiate down the posterior aspect of the thigh. X-ray changes in and about the sacroiliac joints are helpful in making the diagnosis. Loosening of the ligaments of the S.I. joints in pregnancy frequently renders them symptomatic as does "osteitis condensans ilii", a post-partum condition. Ankylosing spondylitis (Marie-Strumpell arthritis) usually is associated with marked stiffness throughout the lower back in a young male and can be easily diagnosed with serum HLA-B27. Ischial (ischiogluteal) bursitis ("Weaver's Bottom") is an irritation of the bursa overlying the ischial tuberosity occurring in patients whose occupations demand prolonged sitting. This is a well circumscribed condition, with point tenderness.

In summary, categorizing hip pain as to location is a method for classification of disease in and about this joint. Interosseous pathology has been excluded from the discussion. Tumors and infections of bone on the pelvic or femoral side of the hip joint may produce pain in one or all of these locations. I hope that approaching patients with this systematic method will lead to more accurate diagnosis and treatment.





EDITORIAL

Goldberg's Discussion on Interstitial Nephritis

Alfred Kahn, Jr., M.D.

The American College of Physicians annual meeting was in Philadelphia, Pennsylvania, in April, 1982. A number of interesting papers were given. There were different types of papers presented, lectures, "meet the professor sessions", and workshops, etc. One of the more interesting "meet the professor" sessions was given by Dr. Martin Goldberg of the University of Cincinnati on Interstitial tubulo-interstitial disease. Dr. Goldberg's presentation was extremely good and extremely thorough. Some of his ideas are presented here.

First of all, Dr. Goldberg states that with interstitial nephritis 90% of the cases have a known etiology, in contrast to glomerulonephritis. Dr. Goldberg describes the interstitium as the structure between the tubules and glomerulus consisting of connective tissue. Dr. Goldberg describes the interstitium of the kidney very much like excelsior around an important object; there is very little interstitium in the cortex — and the majority of the interstitium is in the medulla. He described the function of the interstitial tissue as a concentrating mechanism, promoter of acid excretion and sodium conservationist.

In his presentation Dr. Goldberg divided the interstitial nephritis into an acute and a chronic form. He states that acute interstitial nephritis was characterized by acute inflammation which was often associated with renal pain and fever. He reported various types of acute interstitial nephritis. Acute bacterial interstitial nephritis is sometimes known as acute pyelonephritis. It is accompanied by the signs and symptoms of sepsis plus pyuria, bacteriuria, and white cell casts.

A second type of acute interstitial nephritis is a hypersensitivity variety. Goldberg states that this tends to run a chronic, progressing course to renal failure. The clinical picture which he describes is that of fever, psoas tenderness, blood in the urine, protein in the urine, and acute renal failure at times; he also states that eosinophilia are found in the blood and urine in this disorder. In his experience, this disorder usually stops when the patient ceases exposure to the initiating substance — provided the allergen can be discovered; in other words, although the disorder is occasionally irreversible in most instances, recovery can be expected. Some of the substances which produce hypersensitivity nephritis are Penicillin, sulfa drugs, some diuretics, and rifampon. As noted above, the recurring cause of hypersensitivity nephritis is immunologic. Various theories have been set forth about this including anti-tubular basement membrane antibodies which react with the tubular basement membrane; it is said that the drug hapten may be found with complement and immuno-globulin G. Goldberg states that Gallium Scans might be helpful in making a diagnosis. He also states that there is a type of allergic neuropathy which is seen with non-steroidal anti-inflammatory drugs; these are characterized by lymphocytic infiltration instead of eosinophilia infiltration. Aspirin and Indocin are cited as two such drugs. Physicians should be careful in administering these anti-inflammatory drugs in the presence of renal disease.

The second half of Goldberg's discussion was on chronic interstitial nephritis which he describes as demonstrating interstitial fibrosis, mononuclear cell infiltration, tubular degeneration, and thickening of the basement membrane. He stated that in general, chronic interstitial nephritis had non-specific urinalyses. There were white blood cells and casts present. Protein in the urine was usually less than 1.5 gm per 24

hours. If an I-V Pyelogram was performed, renal scars were found — and occasionally papillary necrosis. He stated that from a functional point of view poor concentration ability of the kidney was one of the very early signs. Most of the patients developed impaired acid excretion leading to hyperchlormie acidosis. The potassium excretion was reduced and this in turn led to hyperkalemia; Goldberg mentions two mechanisms: 1) hyporeninemic and hypoaldosteronism and the other being 2) tubular unresponsiveness. Patients with chronic interstitial nephritis also tended to lose sodium in larger than physiological amounts.

Chronic interstitial nephritis can have varying etiologic mechanisms and Goldberg reported on eight causes. The first was infection such as reflux in children. The second was granulometosis disease like tuberculosis and sarcoid. In the brochure accompanying Goldberg's discussion he indicated that in tuberculosis, ulcers and structures of the lower urinary tract were common. Immunologic chronic interstitial nephritis was a second major category which was discussed; three of the major disorders seen in this category were lupus erythematosus, Sjogrens disease, and transplant rejection. Goldberg said that obstructive neuropathy was the most common cause of interstitial nephritis; it was associated with pressure damage and secondary infection. He also alluded to the fact that repetitive infections set up immunologic changes which may do great damage to the kidney.

Often the cases having obstructive changes had polyuria. Toxic nephropathy is becoming a very widely recognized form of interstitial nephritis. It is widely written up in literature, especially one facet of it — analgesic abuse neuropathy. These cases can be greatly benefitted if they are diagnosed early and taken off the injurious drug. The difficult problem in these cases is that many people will not volunteer that they are taking large quantities of these drugs — the information has to be literally extracted from them. Goldberg states that typical clinical features are a high percentage of cases in women. The course is slowly progressive. Papillary necrosis may occur in more than one-quarter of the cases.

Heavy metals are known to be a cause of interstitial nephropathy and are seldom considered by the physician. The principal offending agents, he states, are lead, cadmium, and beryllium. Crystal nephropathy may cause chronic interstitial nephritis with a hypercalcemic variety as well as a hypercalciuric, and an oxalate type. Dr. Goldberg points out that crystals injure the kidney even if there is no obstruction at times. A member of the audience asked Dr. Goldberg if he treated asymptomatic hyperuricemia and he replied that generally he did not do so.

Radiation nephropathy is said to occur about six months after 2500 R to the kidney and is the result of vascular and interstitial damage. Neoplastic nephropathy is seen in multiple myeloma and anyloid types. Lastly, long-standing high blood pressure is said to produce chronic interstitial nephritis.

Dr. Goldberg's ideas on interstitial nephritis are of extreme interest to the practicing physician.

"From Other Years"*

Journal of the Arkansas Medical Society
Vol. 19 No. 7 December, 1932 p. 163

County Societies

ARKANSAS COUNTY

The Arkansas County Medical Society met in Stuttgart, Tuesday evening, November 22. A special feature of the meeting being the annual wild duck dinner.

Those present were S. S. Beaty and A. C. Watson, England; A. H. Hughes, C. C. Hankinson, J. W. John, T. J. Cunningham, J. F. Gill, Pine Bluff; Robert Caldwell, Paul Mahoney, R. J. Calcote, L. V. Parmley, M. C. John, Jr., D. A. Rhinehart, Homer Scott, S. B. Hinkle, M. E. McCaskill, M. J. Kilbury, C. W. Rasco, Jr., and F. F. Whitehead, Little Rock; T. G. Porter, Hazen; W. L. Boswell, Clarendon; D. C. Lee and son, Robert, and Grayson E. Tarkington, Hot Springs; W. T. Pride and J. S. Speed, Memphis; A. Knutson, Rock Island, Ill.; H. C. Riley, Bayou Meto; R. H. Whitehead, C. E. Park, C. W. Rasco, Homer Dickens, DeWitt; W. W. Lowe, F. A. Poe,

Gillette; C. R. Strait, S. A. Drennen, M. C. John, E. B. Swindler, and J. E. Neighbors, Stuttgart.

Program:

"Some Causes for Long Labor-Analgesia in Obstetrics" — Dr. W. T. Pride, Memphis, Tennessee.

"The Early Treatment of Syphilis"—Dr. Grayson E. Tarkington, Hot Springs.

"Fractures of the Elbow," illustrated with slides—Dr. J. S. Speed, Memphis, Tennessee.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

A House win, a Senate loss, and a brilliant defensive maneuver in a House-Senate conference committee marked this month's chapter in the history of medicine's long struggle to overcome the Federal Trade Commission's self-asserted statutory authority over physicians and other members of the learned professions.

The House win came early in the month with passage of an amendment by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) to an FTC authorization bill by a 245-155 vote.

The vote in favor of Luken-Lee followed the defeat of a "compromise" amendment offered by Rep. Broyhill (R-NC) by a 203-195 vote. The Broyhill amendment has been opposed by the American Medical Association and its allies as "worse than the status quo."

AMA Board of Trustees Chairman Joseph F. Boyle, M.D., said the "vote was strong support for aggressive professional self-regulation — and the AMA accepts the responsibility for assuming a leadership role to make that regulation occur."

But the Senate was not to see eye-to-eye with the House. Two weeks later the Senate Appropriations Committee voted 15-14 to support an amendment offered by Sen. Warren Rudman (R-NH) that would permit FTC a jurisdictional role over medicine.

With only two scheduled days left in the lame-duck session, organized medicine's only chance was to raise the issue anew on the Senate floor by attempting to gain passage of an amendment sponsored by Sen. James J. McClure (R-ID).

But the McClure amendment failed 59-37 in an all-night session and at 6:30 a.m. that morning the Senate passed by voice vote the continuing resolution bill (appropriations) with the Rudman amendment that would give FTC statutory authority over state regulated professions in such areas as boycotts, deceptive practices and price fixing.

James H. Sammons, M.D., AMA Executive Vice President, expressed the Association's disappointment over the Senate's action and warned that if the FTC "prevails in its fight to gain jurisdiction over the professions, the public will suffer because medical societies will no longer be able to carry out their patient advocacy activities."

The FTC did not prevail. Two days later House members of a House-Senate conference committee refused to accept the Rudman Amendment language and stripped its provisions from the bill, thus assuring that nothing in the law specifically gives FTC authority to regulate professionals such as physicians.

"The Congress acted wisely by striking language from the continuing resolution that would have, for the first time, given the Federal Trade Commission the power to regulate America's learned professions, which traditionally have been regulated by the states," said Dr. Sammons. "By rejecting the language proposed by Senator Rudman, the House of Representatives clearly refused to acknowledge FTC's claims to oversee this nation's professionals or their organization — The American Medical Association now looks forward to a victory in the next Congress when

the House and Senate can act to maintain doctors' rights to carry out patient advocacy activities."

* * * *

A tax on part of the health insurance benefits that employees receive from employers has been proposed by senior Administration officials.

Supporters say that the tax would not only generate several billions in revenue, but would help control medical costs, which have been rising twice as fast as the Consumer Price Index.

Health and Human Services (HHS) Department Secretary Richard Schweiker has recommended such a tax, and Martin S. Feldman, chairman of the President's Council of Economic Advisers, strongly supports it. David Stockman, the director of the Office of Management and Budget, proposed such a tax when he was a member of the House of Representatives.

According to officials at HHS, the Treasury, and the Budget Office, a tax on a portion of the health insurance provided to an employee is likely to be included in the budget that President Reagan sends to Congress in mid-January, though the President has not made a final decision.

Congressional action would be needed to impose such a tax. The chairman of the Senate Finance Committee, Sen. Robert Dole (R-KS) indicated last summer that he was receptive to the idea, but organized labor, the health insurance industry, and the U. S. Chamber of Commerce all oppose it. A number of Congressional Democrats have also spoken out against it.

Most U. S. health insurance is provided by employers as a fringe benefit. Under current law, an employer who pays health insurance premiums for his employees can deduct the payments as a business expense on his tax return, but the payments are not counted as taxable income for the employee.

The proposal would require a worker to pay income tax on employer contributions to health insurance premiums above a certain level. The precise ceiling has not been set, but estimates are in the range of $1,200 to $2,400 a year for a family and $900 to $1,200 for an individual. (Employers spent an average of $1,100 in health benefits for each employee last year, according to the U. S. Chamber.)

If the ceiling were set at $1,800, the Treasury could get $3.4 billion in additional federal income taxes, with the tax liability of 23 million taxpayers increased by an average of $148 each, according to a study by the National Center for Health Services Research, a branch of the U. S. Public Health Service.

If the employers' entire contribution were taxed, the government would reap a bonanza — if enacted next year, workers would have to pay an additional $20 billion in income taxes and such an increase in workers' taxable income would also increase 1983 Social Security payroll taxes by $6.5 billion.

Such a drastic approach is considered unlikely.

President Reagan has said he will not seek a tax increase next year, but Administration officials say that the health insurance tax can be defended on the grounds that it will help control the cost of medical care, which in the first 10 months of 1982 rose 9.2 percent — double the overall 4.5 percent CPI rise, according to the Bureau of Labor Statistics.

Feldstein and other economists believe that the current system gives employees more insurance than they need and encourages them to use more health care than they require.

Labor leaders strongly oppose the idea. The AFL-CIO said it represents "unnecessary government intrusion into the collective bargaining process" and "would result in a loss of insurance for many employees." The Health Insurance Association of America says a nation-wide limit on tax-free employer contributions would discriminate against employees who live in high-cost areas and against groups containing large numbers of older workers — who usually have the highest premiums.

* * * *

The AMA has cautioned the Congress to proceed slowly in implementing a system for prospective payment for hospital services.

Joseph F. Boyle, M.D., chairman of the AMA Board of Trustees, told a congressional committee that the AMA supported developing and exploring payment systems for institutions based on "predetermined rates or other payment systems that create incentive for facilities to be more cost-conscious."

He warned, however, that "it would be inappropriate to institute a radical change in the Medicare and Medicaid hospital reimbursement system without assurances that quality care will be maintained."

Dr. Boyle also cautioned against implementing any full-scale prospective payment system "with-

out experimentation and until ongoing projects have been analyzed to determine their effects on costs and quality."

Testifying before the health subcommittee of the House Commerce Committee, the AMA official urged Congress to "consider not only how much these programs are designed to save in terms of dollars but also what effects they will have in human terms and upon the quality of care that will be available to the American people."

In his testimony, Dr. Boyle emphasized that "decisions made in the near future concerning how hospitals and other providers are reimbursed will have long-range implications on access to and the quality of care for years to come."

Hospitals, through their boards, administrators, and medical staffs, are likely to respond to changes in the reimbursement system to try to maintain access and quality care, he said. If hospitals find they are being under-reimbursed, he continued, likely actions will be shifting costs to other payers, deferring such spending as maintenance (often leading to higher long-term costs), and postponing or eliminating necessary modernization and technological improvements, depriving patients of the highest quality of care.

"In extreme cases, hospitals providing essential care could be forced to close," he warned.

Current data are not adequate to confirm that prospective payment is an appropriate nationwide reimbursement system, Dr. Boyle continued. "We strongly urge that further demonstrations go forward before any attempt is made to radically alter the manner in which payment is made for hospital care."

Lacking, he said, is detailed information about what long-term changes would occur in hospitals under a prospective payment system. "What do we do if the 'incentives' change behavior in a way that cuts costs but also forces elimination of needed services and activities?" he asked. "Considerations such as these are best answered through demonstration projects prior to the nationwide implementation of a new medicare reimbursement system."

Any such program, he went on, should be tested on a limited scale.

"It would be a major mistake to impose a prospective payment system on a nationwide scale unless that process had a successful track record," Dr. Boyle said.

"It is important to determine not only whether there are short-term savings that may be generated by a prospective payment system, but also whether the hospitals will continue to be able to provide quality care."

The physician pointed out that while prospective payment systems could be tailored to achieve cost savings, "the question of side effects . . . must be considered." He quoted a General Accounting Office report earlier this year warning that "there is a point when a reduction in reimbursement could adversely affect access to and/or quality of care for beneficiaries. Also, if the prospective reimbursement does not apply to all payers, a facility can have an incentive to shift costs to non-covered payers."

Dr. Boyle emphasized that a proposal that did not cover all payers nationwide might lead to massive cost shifting. Further, he warned, "an inadequate reimbursement system could foster a two-tiered system of health care in this country, with one level of care for private-pay patients and the other level of care for public patients."

If Medicare and Medicaid fail to bear their fair share of financial responsibility "the potential would exist for some hospitals to discourage acceptance of public patients. Those hospitals with large public patient loads would find themselves with increasing difficulty in maintaining financial viability," he said.

Other questions that arise, the physician said, include:

- Would all costs of hospitals be covered adequately, including such costs as teaching programs and capital expenditure?
- Would there be any adjustments and appeals mechanism?
- What level of access to care would be acceptable?
- Would care have to be rationed?
- How would hospitals be encouraged to make expenditures to improve technology?
- Would the system make adjustments for hospitals that already have undertaken cost-saving measures and are operating efficiently?

"Questions such as these must be used to measure any system of prospective payment," he said, "and they should be answered prior to national implementation of any reimbursement system."

* * * *

American Medical Association President William Y. Rial, M.D., has commended the Presi-

dential Commission on Drunk Driving for its efforts to reduce alcohol-related highway deaths and pledged AMA support of further efforts by the Commission.

"Fatalities and serious injuries resulting from accidents involving drunk drivers have reached epidemic proportions in this country," said Rial, a family practitioner from Swarthmore, Pa. "The AMA believes that increased efforts at reducing carnage on our highways caused by drunk driving are long overdue."

In December 1981, the AMA House of Delegates adopted a resolution supporting more stringent enforcement of drunk driving laws and urging state medical associations to work towards such a goal.

"The AMA has gone on record supporting federal legislation that provides funds to states that voluntarily improve their laws and programs to curtail drunk driving," Rial testified. He added that funding made available through Public Law 97-364 makes the achievement of such goals possible.

In addition to supporting the funding of state efforts to improve drunk laws, Rial also stressed the importance of strengthening alcohol treatment programs. "While the Association recognizes that the problem of drunk driving is not limited to those suffering from alcoholism," Rial said, "we believe that treating such individuals can be effective in curtailing drunk driving. Improving treatment for alcoholism is one in a number of important components in the AMA's total commitment to public health."

* * * *

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

BURNS

Presented by Fred Caldwell, M.D., *April 5, 12:00 noon,* Ouachita Memorial Hospital, Hot Springs. Sponsored by St. Joseph's Regional Health Center. One hour Category I credit.

DIABETES MELLITUS—A PRACTICAL APPROACH

Presented by Ralph A. De Fronzo, M.D., Assistant Professor, Department of Nephrology, Yale University Hospital; Allan L. Drash, M.D., President-elect, American Diabetes Association and Professor of Pediatrics, University of Pittsburgh School of Medicine, and others, *April 7, 8,* Excelsior Hotel and State House Convention Center. Ten hours Category I credit. Co-sponsored by St. Vincent Infirmary. Registration fee: $40 for physicians.

NEW LAB PROCEDURES

Presented by Douglas Young, M.D., *April 18, 6:30 p.m.,* Doctors' Dining Room, Memorial Hospital, North Little Rock. One hour Category I credit. No registration fee.

EVALUATION OF PUPILS

Presented by Jan Scruggs, M.D., *April 18, 7:00 p.m.,* Memorial Hospital, North Little Rock. One hour Category I credit. No registration fee.

CORONARY HEART DISEASE

Presented by Donald C. Brator, M.D., and Michael D. Winniford, M.D., Dallas, Texas, *April 28, 4:00 p.m. to 9:00 p.m.,* Holiday Inn, I-30 and Stateline, Texarkana. Four hours Category I credit. Sponsored by AHEC-Southwest. No registration fee.

SEXUAL DYSFUNCTION

Presented by Raymond Bauer, M.D., Associate Clinical Professor of Psychiatry, Tulane University School of Medicine, *April 20, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

SLEEP DISORDERS

April 23, 8:00 a.m. to 12:30 p.m., Shuffield Auditorium, Baptist Medical Center. Four hours Category I credit. No registration fee.

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

THE GENERAL PRACTICE OF ANESTHESIOLOGY

Presented by the Arkansas Society of Anesthesiology, Richard Clark, M.D., Chairman, and the Department of Anesthesiology, UAMS, *April 29 - May 1,* Red Apple Inn, Heber Springs. Sponsored by UAMS. Five and one-half hours Category I credit. Registration fee: No charge for ASA members, $40 for non-members, $20 for C.R.N.A.'s.

CALCIUM ANTAGONIST

Presented by Allen Paulk, M.D., *May 3, 12:00 noon,* Ouachita Memorial Hospital, Hot Springs. Sponsored by St. Joseph's Regional Health Center. One hour Category I credit.

1983 PEDIATRIC UPDATE SEMINAR

May 13-15, Fairfield Bay. 15 hours Category I credit. Sponsored by Arkansas Children's Hospital. No other information available.

RADIONUCLIDE EVALUATION OF RENAL DISEASE

Presented by Anton J. Bueschen, M.D., Department of Surgery, Division of Urology, University of Alabama, Birmingham, *May 17, 7:00 p.m.,* Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-SOUTH ARKANSAS

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Medical Journal Club Conference, fourth Tuesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second, and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, second and fourth Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and fourth Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, second and third Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-NW

Medicine Teaching Conference, each Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, April: Renal, George Ackerman, M.D.; May: Infections Diseases, Robert Abernathy, M.D.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-NORTHEAST

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Methodist Hospital of Jonesboro Cafeteria.
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, Burn Conference Room.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Primary Care Seminar, each Wednesday, 8:15 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category I credit. (Pre-registration with Department of Medical Education required.)
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.

General Internal Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1.
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.
Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 pm., to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., St. Vincent Infirmary in April; Doctors Hospital in May.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:30 p.m. to 6:30 p.m., Room S1169 Laboratory.
Nephrology Conference, third Wednesday, 7:30 a.m. to 8:30 a.m., Room E159.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA — AHEC-SOUTHWEST

AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
AHEC Regional Nephrology Conference, first Friday, 7:30 a.m., St. Michael Hospital.



PERSONAL AND NEWS ITEMS

DR. DORZAB ELECTED CHIEF

Dr. Joe Dorzab was elected chief of staff at Sparks Regional Medical Center in Fort Smith. Dr. Gary Felker of Fort Smith is the outgoing chief of staff. Other officers elected are Dr. William Tate as vice chief and Dr. Richard Aclin as secretary.

Department chiefs elected are as follows: Dr. James Buie, Orthopaedics; Dr. Pat Chambers, Psychiatry; Dr. Edwin Coffman, Anesthesia; Dr. Neil Crow, Sr., Radiology; Dr. John Deaton, Cardiology; Dr. Charles Floyd, Pediatrics; Dr. R. Gene Girkin, Pathology; Dr. Bruce Glover, Obstetrics-Gynecology; Dr. Cole Goodman, Surgery; Dr. John Kientz, Medicine; Dr. Stanley McEwen, EENT; Dr. Charles Reul, Neurology; Dr. Stanley Reyenga, Emergency Room; Dr. James Thompson, Family Practice; Dr. William Turner, Oncology, and Dr. Steve Wilson, Urology.

DR. BURKS TEACHES

Dr. Willard Burks of Wynne served as an instructor for a Pharmacology course for nursing personnel at Cross County Hospital.

DR. SMITH JOINS DR. McCONKIE

Dr. Bruce L. Smith, formerly of Little Rock, has joined Dr. Stuart B. McConkie at the McConkie Orthopaedic Clinic in Hot Springs.

DR. COSTAS JOINS UNIVERSITY

Dr. Bronier (Stormy) Costas has joined The Department of Orthopaedic Surgery, Section of Hand Surgery, at the University of Arkansas College of Medicine. Dr. Costas specializes in microvascular reconstructive surgery and surgery of the hand.

DR. ROY IN INDIA

Dr. F. Hampton Roy of Little Rock attended the Forty-Second All-India Ophthalmological Conference in Pune, India, as the medical director of the World Eye Foundation. While in India, Dr. Roy visited six medical centers and contacted approximately 700 ophthalmologists about the

activities of the World Eye Foundation and the Indo-American Ophthalmology Society.

DR. YOUNG PRESIDENT

Dr. Sandra Young of Russellville has been elected president of the Pope County Medical Society. Dr. Frank Lawrence was elected vice president and Dr. Ernest King as secretary-treasurer.

DR. LEWIS SPEAKS

Dr. James Lewis of Searcy spoke to the White County Medical Assistants on Reye's Syndrome.

DR. LAULE SPEAKER

Dr. Alice Laule of Harrison was guest speaker at the graduation ceremonies of the Boone County Hospital's Surgical Technology Class.

DR. LEACH LOCATES

Dr. John Leach, a General Surgeon, has opened an office at 907 Mena in Mena.

DR. TEETER ASSISTS

Dr. Stanley Teeter of Russellville assisted the Sequoyah Elementary School fifth grade students in dissecting cow lungs during their study of the respiratory system as part of the Berkley Health Program.

DR. HOLDER SPEAKS

Dr. Robert E. Holder of Bentonville addressed the Rogers Kiwanis Club regarding preventive medicine and keeping health care costs down.

SECOND OFFICE OPENED

Doctors James Arkins, Robert Holder and Hunter M. Steadman have recently opened a second office located in Bella Vista. They will also continue to practice Family Medicine at Bentonville.

DR. HARPER DAY

Dr. Bland R. Harper of Monette was honored January 16th when the mayor and city council proclaimed "Dr. Harper Day" and held a reception in his honor. Dr. Harper retired from practice at the end of 1982.

DR. JORDAN MOVES

Dr. F. Richard Jordan has opened an office at 520 West Pershing Boulevard in North Little Rock. He specializes in Pediatric and General Neurosurgery.

DR. BUFFINGTON

Dr. Mike Buffington has returned to DeQueen for full-time practice with the DeQueen Clinic.

DR. WALLACE HONORED

The annual banquet of the Green Forest Chamber of Commerce featured a tribute to Dr. Oliver Wallace for his twenty-five years of medical practice in Green Forest.

DR. NETTLESHIP ELECTED

Dr. Mae B. Nettleship of Fayetteville was elected chief of staff at Washington Regional Medical Center. Other officers elected are: Dr. James Moore, vice chief of staff; Dr. Monte Painter, chairman of the Department of Medicine; Dr. W. Duke Harris, chairman of the Department of Surgery.

DR. LINDSAY LOCATES

Dr. Jim Lindsay, a pediatrician, has opened an office in Van Buren.

DR. BRUNNER PRESIDENT

Dr. John Brunner has been elected president of the medical staff at St. Joseph's Regional Health Center in Hot Springs. Dr. Martin Koehn is president-elect, Dr. R. Paul Tucker is chairman of the Medicine Department, Dr. Robert Aspell, chairman of the Surgery Department, and Dr. Stephen Bodemann is secretary-treasurer.

DOCTORS SPEAK AT SEMINAR

Drs. Anthony R. Giglia, Anthony Bucolo and Kerry Ozment of Little Rock spoke at the Arkansas State Medical Assistants Society education seminar. Topics discussed were "Emphysema" by Dr. Giglia, "Carcinoma of the Breast" by Dr. Bucolo, and "Breast Implants" by Dr. Ozment.

DR. LANG SPEAKS

Dr. Patricia Lang of Hot Springs Village spoke at a recent meeting of the Hot Springs Village Lioness Club.

DR. ASHABRANNER

Dr. W. J. Ashabranner of Heber Springs has been appointed flight surgeon for the 122nd Army Reserve Command.

DR. NOLEN MOVES

Dr. James E. Nolen has joined Drs. T. H. Wortham, Rex N. Moore, Ronald D. Fewell, Phillip A. Tracy and Alan R. Storeygard at 813 Marshall Road in Jacksonville for the practice of Family Medicine.

DR. DODGE HONORED

Dr. Eva Dodge, formerly of Little Rock, was honored with a Distinguished Achievement Cita-

tion from Ohio Wesleyan University, her alma mater, for her pioneering work in birth control and health care. Dr. Dodge, a life member of the Society, now resides in North Carolina.

DR. HUTCHESON ELECTED

Dr. F. A. Hutcheson is chief-of-staff-elect at St. Michael Hospital in Texarkana. Dr. J. B. Kittrell is chief of the family practice section.

PHYSICIANS LECTURE

Dr. Charles Ledbetter of Harrison and Dr. Hubert Peterson of Mountain Home presented lectures during a surgical technology course at Boone County Hospital. Dr. Ledbetter spoke on orthopaedics and Dr. Peterson spoke on anatomy.

DR. CAPLINGER ELECTED

Dr. Kelsy Caplinger, III, of Little Rock was elected president of the Pulaski County Medical Society. Other officers are: Dr. Harold Purdy, president-elect; Dr. Warren M. Douglas, vice president; Dr. Fred O. Henker, III, secretary; Dr. David L. Barclay, treasurer, and Dr. Charles H. Rodgers, treasurer-elect.



NEW MEMBERS

DR. THEERASAK TUANGSITHTANON

Dr. Tuangsithtanon, a native of Ranong Province, Thailand, is a new member of the Chicot County Medical Society.

His pre-medical education was at Chiangmai University in Chiangmai, Thailand. He was granted his medical degree from the Chiang Mai University in 1970. After an internship with the Elmhurst General Hospital in Queens, New York, Dr. Tuangsithtanon received residency training at Brookland-Cumberland Hospital and Harlem Medical Center in New York. He is board certified in Radiology.

Before moving to Lake Village in 1981, Dr. Tuangsithtanon practiced for two years at the Veterans Administration Medical Center in Des Moines, Iowa.

He specializes in Diagnostic Radiology. His office is in the Chicot Memorial Hospital on Highway 82 at 65 in Lake Village.

DR. NAOMAL J. JAYASUNDERA

Dr. Jayasundera, a new member of the Garland County Medical Society, was born in Galle, Sri Lanka.

He received his pre-medical education at St. Thomas College in Mt. Lavinia, Sri Lanka. Dr. Jayasundera was graduated from Ceylon Medical College, Sri Lanka. He served an internship at General Hospital in Colombo, Sri Lanka, with six months training in general medicine and six months training in Obstetrics-Gynecology. Dr. Jayasundera was in residency training two years with Rural Hospital Imaduwa, Sri Lanka. He was in general practice for two years with the Katukurunda Clinic, Kalutara, Sri Lanka.

Dr. Jayasundera trained with St. Mary's Health Center in St. Louis, Missouri, from 1972 until 1975, serving an internship and internal medicine residency. He was a Pulmonary Disease Fellow with the University of Arkansas for Medical Sciences and the Veterans Administration Medical Center from 1975 to 1977. He served as an instructor in Medicine at the Medical Center in Little Rock from 1975 to 1980 and was named Assistant Professor of Medicine in 1980. Dr. Jayasundera has served the Veterans Administration Medical Center in Little Rock as staff physician, Tuberculosis Control Officer and Medical Director of the Department of Respiratory Therapy.

Dr. Jayasundera is associated with The Diagnostic and Treatment Center at 225 Linden in Hot Springs.

DR. CHARLES S. LANE, III

Dr. Lane has joined the Garland County Medical Society. He was born in Fort Smith.

Dr. Lane received his B.A. from Baylor University in Waco, Texas, in 1974. He is a 1978 graduate of the University of Arkansas College of Medicine. After an internship at Louisiana State University Hospital in Shreveport, Dr. Lane received his residency training at Barnes Hospital, Washington University, in St. Louis.

Dr. Lane specializes in Psychiatry. His office is located at 225 Linden in Hot Springs.

DR. RUSTON Y. PIERCE

Dr. Pierce is a new member of the Jefferson County Medical Society. He was born in Little Rock.

Dr. Pierce received his Bachelor of Science degree from Tulane University, New Orleans, in 1974 and his medical degree from the Tulane University School of Medicine in 1978. His internship and residency were at the University of Arkansas College of Medicine.

Dr. Pierce practices Obstetrics and Gynecology at 1702 West 42nd in Pine Bluff.

* * * *

The Miller County Medical Society has added three new members to its roll:

DR. D. MICHAEL BLANKENSHIP

Dr. Blankenship was born in Omaha, Nebraska. He received his B.A. degree from the University of Nebraska in 1973 and his medical degree from the University of Nebraska College of Medicine in Omaha in 1977. Following his internship and residency training at St. Paul Hospital in Dallas, Dr. Blankenship was in a Fellowship at Parkland Hospital in Dallas. He is board certified in Internal Medicine.

Dr. Blankenship specializes in Internal Medicine and Nephrology. He is associated with the Collom and Carney Clinic at 4800 Texas Boulevard in Texarkana.

DR. RICHARD W. PECKHAM

Dr. Peckham, a native of Houston, is a 1974 graduate of Rice University in Houston and a 1978 graduate of the University of Texas Southwestern Medical School in Dallas. From 1978 to 1981, Dr. Peckham served his internship and residency at the University of Alabama in Birmingham Affiliated Hospitals and Clinics. From June 1981 to June 1982, he served as Chief Resident and Instructor in Medicine.

Dr. Peckham specializes in Internal Medicine. His office is in the Main Medical Center at 1001 Main Street in Texarkana.

DR. ERIC E. HALL

Dr. Hall specializes in Obstetrics and Gynecology at Collom and Carney Clinic in Texarkana.

He was born in Wichita Falls, Texas, and was graduated from the Stephen F. Austin State University in Nacogdoches, Texas. Dr. Hall received his medical degree from the University of Texas Southwestern Medical School in Dallas in 1978. His internship and residency were at St. Paul Hospital in Dallas.

Dr. Hall's mailing address is Post Office Box 1409, Texarkana 75501.

* * * *

DR. EDWARD B. HILL

Dr. Hill, a new member of the Saline County Medical Society, was born in County Westmeath, Ireland.

He was granted a Bachelor of Arts in Biology from Hendrix College, Conway, in 1974, and was graduated from the University of Arkansas College of Medicine in 1979. Dr. Hill served his internship and residency at the University.

Dr. Hill specializes in Internal Medicine and has his office at 111 McNeil in Benton.

OBITUARY

DR. JOSEPH E. CROSS

Dr. Joseph E. Cross of DeWitt died January 17, 1983. He was born November 3, 1931, in Memphis.

Dr. Cross received a Bachelor of Arts degree in 1953 from Hendrix College at Conway. He was graduated in 1957 from the University of Arkansas College of Medicine. He served with the United States Army for two years.

Dr. Cross practiced medicine in DeWitt from 1960 until his retirement in 1981.

He is survived by his wife, Mrs. Jeanne Knighten Cross, and three sons.

DR. BILLY B. LIVINGSTON

Dr. Livingston of Camden died January 15, 1983. He was born March 21, 1930, in Chidester.

Dr. Livingston received a Bachelor of Science in Pharmacy degree from the University of Arkansas School of Pharmacy — Southern State College. He was graduated from the University of Arkansas College of Medicine in 1964. His internship was with Westmoreland County General

Hospital in Greensburg, Pennsylvania.

From 1964 to 1966, Dr. Livingston served with the United States Army. At the time of his death, he held the commission of Lieutenant Colonel in the Army Reserve.

Dr. Livingston was a board certified Family Physician, a fellow of the American Academy of Family Physicians, a member of the Arkansas Arthritis Society and its scientific advisory committee, a member of the Southern Medical Association, the American Geriatric Society, the Arkansas Heart Association and the United Surgeons of the United States Army Reserve. He served as chairman of the advisory committee of the Camden School of Practical Nurses. He was formerly chief of staff at Ouachita County Hospital.

Dr. Livingston is survived by his wife, Mrs. Dorothy Summrall Livingston, two sons, two daughters, a stepson and a stepdaughter.

DR. ALBERT E. KALDERON

Dr. Kalderon died February 12th. He was born July 27, 1933, in Istanbul, Turkey.

He received a State Diploma in Sciences from the College St. Michel in Istanbul, Turkey. Dr. Kalderon was graduated from the Istanbul University School of Medicine in 1961. His internship was with Mercy Hospital in Des Moines, Iowa, from 1961 to 1962. From 1962 to 1966, he served a Pathology residency at Albert Einstein College of Medicine in Bronx, New York. Dr. Kalderon was board certified in Anatomic and Clinical Pathology.

From 1968 to 1971, Dr. Kalderon was a member of the faculty at Tufts Medical School in Boston. He taught at Brown University in Providence, Rhode Island, from 1971 to 1975. In 1976, Dr. Kalderon joined the University of Arkansas College of Medicine. At the time of his death, he was a Professor of Pathology at the University.

Dr. Kalderon was a member of the American Association of Pathologists, International Academy of Pathology, New York Academy of Sciences, American Thyroid Association, and the Arthur Purdy Stout Society.

Dr. Kalderon is survived by his wife, Janet Seuferer Kalderon, and two sons.

THINGS TO COME

April 20-21

Ninth Annual Symposium on Family Practice. Department of Family Practice, The University of Kansas College of Health Sciences and Hospital and American Academy of Family Physicians. Battenfeld Auditorium, Student Center–Continuation Study Building, Rainbow at Olathe Boulevard, Kansas City, Kansas. Fee: $110; single day fee $60. 14 hours AMA Category I. 13 prescribed hours AAFP. For further information, contact Office of Continuing Education, The University of Kansas College of Health Sciences and Hospital, Rainbow at Olathe Boulevard, Kansas City, Kansas 66103; phone 913-588-4488.

April 22

Twenty-Seventh Annual Infectious Diseases Symposium. Department of Family Practice, The University of Kansas College of Health Sciences and Hospital and American Academy of Family Physicians. Battenfeld Auditorium, Student Center–Continuation Study Building, Rainbow at Olathe Boulevard, Kansas City, Kansas. Fee: $12, nonrefundable. Six hours AMA Category I and AAFP prescribed. For further information, contact Office of Continuing Education, The University of Kansas College of Health Sciences and Hospital, Rainbow at Olathe Boulevard, Kansas City, Kansas 66103; phone 913-588-4488.

April 23

Colorectal Cancer: Essentials for Primary Care Physicians. Office of Continuing Medical Education, Memorial Sloan-Kettering Cancer Center; Department of Family Practice and Division of Health Care Outreach and Continuing Education, University of Kansas College of Health Sciences and Hospital. Battenfeld Auditorium, Student Center–Continuation Study Building, Rainbow at Olathe Boulevard, Kansas City, Kansas. Fee: $20, payable to The University of Kansas Medical Center. Six hours AMA Category I; six prescribed hours AAFP; six cognates, Formal Learning, The American College of Obstetricians and Gynecologists. For further information, con-

tact Office of Continuing Medical Education, The University of Kansas College of Health Sciences and Hospital, Rainbow at Olathe Boulevard, Kansas City, Kansas 66103; phone 913-588-4488.

April 28-30

Forty-fifth Annual Meeting of the Louisiana-Mississippi Ophthalmological and Otolaryngological Society. Biloxi Hilton, Biloxi, Mississippi. For further information, contact Ben A. Davis, Jr., CAE, Executive Secretary, Post Office Box 12314, Jackson, Mississippi 39211; phone 601-956-7787.

June 6-10

Clinical Decision Making in Alcoholism and Drug Abuse. Smithers Physicians Education Program. For information, contact Andrew J. Gordon, Ph.D., Smithers Alcoholism Treatment and Training Center, St. Luke's–Roosevelt Hospital Center, 428 West 59th Street, New York, New York 10019; phone 212-554-6725.

RESOLUTIONS



DR. JOHN V. BUSBY

WHEREAS, the recent death of our esteemed member, Dr. John V. Busby, is noted with sincere sorrow, and

WHEREAS, he had been a loyal member of this organization for twenty-eight years, giving generously of his time to the interests and programs of the Society, and

WHEREAS, Dr. Busby was recognized for his contributions in the field of psychiatry, his chosen specialty.

BE IT THEREFORE RESOLVED:

THAT, this resolution be placed in the permanent archives of the Society, and

THAT, a copy be forwarded to Dr. Busby's family as an expression of our heartfelt sympathy, and

THAT, a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication.

By Action of the Memorials Committee,
Pulaski County Medical Society
H. Elvin Shuffield, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M.D.

DR. MICHAEL N. HARRIS

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of their colleague, Dr. Michael N. Harris, and

WHEREAS, he was recognized within the profession for his great talent and skill in his chosen specialties of internal medicine and rheumatology, and

WHEREAS, Dr. Harris devoted his special skills and attention to the programs of the American Rheumatism Association and the Arthritis Foundation in order to elevate the effectiveness of these organizations.

BE IT THEREFORE RESOLVED:

THAT, this resolution be made a part of the permanent records of this Society, and

THAT, a copy of this resolution be forwarded to Dr. Harris' family as an expression of our sincere sympathy, and

THAT, a copy be sent to the Journal of the Arkansas Medical Society for publication.

By Action of the Memorials Committee,
Pulaski County Medical Society
H. Elvin Shuffield, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.

Announcement

The article entitled, "Heart Transplantation" published in the December, 1982, issue of the Journal of the Arkansas Medical Society were the remarks made by Dr. Norman E. Shumway during an AOA lecture at the University of Arkansas for Medical Sciences Campus on May 1st, 1981. (AOA stands for Alpha Omega Alpha)



ARKANSAS MEDICAL SOCIETY AUXILIARY WINTER BOARD MEETING

The Arkansas Medical Society Auxiliary held its Winter Board Meeting at the home of Dr. and Mrs. Frank Morgan on January 11, 1983. President Ramona Taylor conducted the meeting with her usual verve and welcomed special guests: Dr. and Mrs. Morriss Henry, Dr. Asa Crow, Dr. Larry Lawson, Ms. Nan Mulvaney, and Mr. Ken LaMastus.

Committee reports reflected the diversity of activities in which the Auxiliary either participates actively, or supports morally and/or financially. Among those interests are: *A School Health Curriculum Project (Berkeley Model),* a health curriculum which is designed to teach children how to maintain fit, healthy bodies by cultivating "healthy habits" based on accurate information. *Loan Funds,* administered by the Auxiliary, make funds available to eligible students in medical fields. *Medical Camps of Arkansas at Camp Aldersgate,* makes the camping experience available to children who have a medical disability. These children would not be able to participate in camping were it not for the existence of Medical Camps. *Legislation,* current and/or pending, which affects the practice of medicine and the community at large. A *Cookbook* which is being prepared for publication. It will be a compilation of favorite recipes from Auxiliary members from around the State. Recipes from husbands, those who know where the kitchen is at their house, will also be included. The *Arkansas Medical Society Convention* and the *Southern Medical Association Convention,* each year Auxiliary members play a vital part in the planning and success of these conventions.

Dr. Morriss Henry provided the group with an overview of bills which are currently before the Legislature, in the process of being drafted, or which have not yet been introduced. He briefly discussed legislation dealing with acupuncture, pharmacist drug substitution, abortion, midwives, health insurance, and drunk driving. Dr. Henry urged all Auxiliary members to inform themselves and to make their views known. He said that, henceforth, the Legislative Alert newsletter will be sent to the wives of physicians as well as to the physicians.

Drs. Asa Crow and Larry Lawson discussed the structure and activities of the Arkansas Medical Society Political Action Committee. Dr. Crow told the group that the practice of medicine is being increasingly controlled by politicians. He pointed to the steadily increasing regulation of every phase of the diagnosis and treatment of patients. He outlined the need for and the best method for making one's views known.

Dr. Lawson said that legislation affects every physician in the state. There are 2,075 physicians who belong to the Arkansas Medical Society, yet AMSPAC has a membership of only 154 and some of those members are wives of physicians. His message was threefold: get involved, join with others to make your views known, support AMSPAC.

Mrs. Taylor thanked the Auxiliary members for their efforts in the many Auxiliary projects and the special guests for their informative and provocative talks. The meeting was adjourned to reconvene at the Pre-Convention Board Meeting on May 5 at the Hilton Inn in Fayetteville.

Mary Bonner
Publicity Chairman

ANSWER—Electrocardiogram of the Month

DISCUSSION: The trace shows the patient to be in sinus rhythm with one premature ventricular beat. Left axis deviation is present and the QT interval is prolonged. Q-waves are present in II, III, AVF, and V_4-V_5. The R-waves progress poorly from V_1-V_5 and there are ST-T changes of a diffuse and nondiagnostic nature present. The Q-waves lend credence to the past history of infarctions, but in an overall sense, the trace is not compatible with acute infarction. However, the sensitivity of the ECG as a diagnostic tool for acute infarction decreases significantly after multiple infarctions and hence cannot be used to exclude another acute event. QT prolongation and ST changes occur with quinidine and are compatible with, though not diagnostic of, quinidine use. The P-waves, axis, and ST-T abnormalities suggest LVH with an associated atrial abnormality. Obviously, sufficient information is lacking to diagnose rheumatic heart disease. Indeed, all his physical and many electrographic findings can be explained on the basis of ischemic heart disease. So, remarks A., C., and D. are false.



Auxiliary President Ramona Taylor presiding.



Society President-elect Asa Crow, M.D. "... the practice of medicine is being increasingly controlled by politicians."



Auxiliary President-elect Joann Cornell. Help this lady put a Hog Hat on the Mississippi delegates at the National Convention. Increase your membership.



AMSPAC Chairman Larry Lawson, M.D. Get involved, make your views known, support AMSPAC.



Society President Morriss Henry, M.D. Legislation pending from acupuncture to drunk driving.



Auxiliary Past President Margaret Ann Morgan preparing lunch for the Board members and guests.

Dr. Morriss Henry, President of the

ARKANSAS MEDICAL SOCIETY,

invites you to

FAYETTEVILLE, ARKANSAS

for the

Society's Annual Session

May 5-8, 1983

Hilton Hotel
and adjacent
Center for Continuing Education

Scientific Program Theme: "Old and New — A Delicate Blend"
Dr. Paul Wallick, Program Chairman

Scientific and Technical Exhibits on display Thursday, May 5

Business Sessions on Thursday, May 5, and Sunday, May 8

Scientific Sessions on Friday, May 6, and Saturday, May 7

Specialty Group meetings Saturday, May 7

Evening social activities will include a Thursday evening reception hosted by Blue Cross-Blue Shield, a "Hog Wild" party on Friday evening with Razorback Coach Lou Holtz as speaker, and the inauguration of President-elect Asa Crow of Paragould on Saturday evening.

ANNUAL MEETING PROGRAM

Hilton Hotel and Center for Continuing Education

May 5-8, 1983 Fayetteville



CONVENTION OFFICIALS

CHAIRMAN: Paul A. Wallick, M.D., Monticello

PROGRAM COMMITTEE:

R. W. Ross, M.D., Fort Smith
Frank E. Morgan, M.D., North Little Rock
John M. Hestir, M.D., DeWitt
C. Lynn Harris, M.D., Hope
Michael C. Reese, M.D., Rogers
Wade Burnside, M.D., Fayetteville
John W. Vinzant, M.D., Fayetteville
Craig Brown, M.D., Fayetteville
William C. Martin, M.D., Fayetteville
Thomas A. Bruce, M.D., Little Rock
Kelsy Caplinger, M.D., Little Rock
John H. Delamore, M.D., Little Rock
Charles H. Rodgers, M.D., Little Rock
W. Ely Brooks, M.D., Fayetteville
Richard O. Martin, M.D., Paragould
Ken Lilly, M.D., Fort Smith
J. Larry Lawson, M.D., Paragould
Robert Casali, M.D., Little Rock

DISTRICT HOSTS: SIXTH COUNCILOR DISTRICT

F. E. Joyce, M.D., Texarkana
James Armstrong, M.D., Ashdown

SCIENTIFIC EXHIBITS CHAIRMAN: J. Darrell Bonner, M.D., Paragould

MEMORIAL SERVICE CHAIRMAN: James Armstrong, M.D., Ashdown

CONTINUING MEDICAL EDUCATION CREDIT

As an organization accredited for continuing medical education, the Arkansas Medical Society Committee on Scientific Programs certifies that this continuing medical education activity meets the criteria for hour-for-hour credit in Category I of the Physician's Recognition Award of the American Medical Association.

EDUCATIONAL GRANTS

The Arkansas Medical Society expresses appreciation to the following firms for sponsorship of scientific session speakers:

Pfizer Laboratories
USV Pharmaceuticals
CIBA Pharmaceuticals
Ayerst Laboratories
Merck, Sharp, and Dohme

The Society also expresses appreciation to the following for an educational grant for the convention:

Eli Lilly and Company

General Information

REGISTRATION

The location for the Society's registration desk and the hours for registration will be as follows:

Wed., May 4	Center for Continuing Education, 4th floor	3:00 p.m. - 5:00 p.m.
Thurs., May 5	Center for Continuing Education, 4th floor	8:00 a.m. - 5:00 p.m.
Fri., May 6	Center for Continuing Education, 4th floor	8:00 a.m. - 5:00 p.m.
Sat., May 7	Hilton Hotel, 2nd floor	8:00 a.m. - 5:00 p.m.
Sun., May 8	Hilton Hotel, 2nd floor	8:00 a.m. - 11:00 a.m.

Registration cards and badges will be prepared in advance for the officers of the Arkansas Medical Society and for the county society delegates. Delegates are requested to present credentials in proper form when registering.

All members and visitors are requested to register, as admission to all sessions will be by badge only. Bring your 1983 membership card to facilitate registration.

There will be a $5 registration fee for non-member physicians.

Advance reservations will be requested by mail for the "Hogwild" party on Friday evening and for the Prayer Breakfast on Sunday morning. Please watch your mail for reservation forms.

TELEPHONE SERVICE

The Society's convention registration desk may be reached through the telephone service for the Center and the Hotel. The telephone numbers are:

Center for Continuing Education: 575-3604

Hilton Hotel: 442-5555

BLUE CROSS-BLUE SHIELD RECEPTION

A reception for members of the Society and their guests will be hosted on Thursday evening by Arkansas Blue Cross-Blue Shield. The reception begins at 7:00 p.m. in the Hilton.

"HOGWILD" PARTY

A "Hogwild" party is planned for the Friday evening of this convention in Razorback country. The party will begin at 7:00 p.m. and will be held in the Hilton. There will be a tailgate-picnic-type buffet. Red and white attire appropriate for an athletic event is encouraged. Razorback football coach Lou Holtz will be our special guest.

There will be a band for dancing following the dinner and program.

Watch your mail for advance reservations and ticket sales for the "Hogwild" party.

INAUGURAL ON SATURDAY EVENING

Dr. Asa Crow of Paragould will be installed as the new president of the Arkansas Medical Society during a ceremony on Saturday evening. Special plans are being made to make the inaugural activities particularly enjoyable.

The evening will open with cocktails at 7:00 p.m. The current president of the Society, Dr. Morriss Henry of Fayetteville, will be master of ceremonies for the inauguration of Dr. Crow. Entertainment is planned for the inaugural program. The inauguration will be followed by a Council-hosted reception. Members are encouraged to plan to be present at the Hilton on Saturday evening for this function.

FIFTY YEAR CLUB MEETING

The Society will host a luncheon for members of the Fifty Year Club on Friday, May 6, at 12:00 noon in the Hilton Hotel. There will be a showing of a film on the life of Sir William Osler.

Physicians eligible for membership in the Fifty Year Club this year are Dr. Jeff Baggett of Prairie Grove; Dr. Ulys Jackson, Dr. Henry Kirby, and Dr. O. B. McCoy, all of Harrison; Dr. Ruth E. Lesh of Fayetteville, Dr. Milton C. John, Jr., of Stuttgart, Dr. John Walter Jones of Texarkana, Dr. Jim McKenzie of Hope, Dr. Ross Maynard of Pine Bluff, Dr. J. P. Price of Monticello, Dr. Gerald Schumann of Des Arc, and Drs. Woodbridge Morris, M. D. Ogden, and Oba B. White, all of Little Rock.

Dr. John McCollough Smith of Little Rock is president of the Fifty Year Club and Dr. Max F. McAllister of Fayetteville is secretary.

PRESIDENTS' LUNCHEON

The Society will host a luncheon at 12:00 noon on Friday, May 6, for physicians who have served as president of the Arkansas Medical Society. The luncheon will be held at The Old Post Office restaurant in the center of Fayetteville's historic square.

PRAYER BREAKFAST

The Committee on Medicine and Religion will sponsor a Prayer Breakfast on Sunday morning. The breakfast will begin at 7:30 a.m. in the Hilton Hotel. Dr. Walter O'Neal, chairman of the Committee, has announced the following program:

Invocation: Dr. Joel Cook, Osceola

Devotional: Dr. Ray Jouett, Little Rock

Group Singing: Led by Dr. C. R. Ellis, Malvern

Choral Program: New Creation Choir, University Baptist Church, Fayetteville

Memorial Service

A joint Society-Auxiliary Memorial Service will be held on Saturday morning, May 7, beginning at 11:30 a.m. The Society president, Morriss Henry, M.D., of Fayetteville, will preside. The program for the service will be as follows:

Scripture Psalm 1
Lowell Harris, M.D., Hope

Original Anthem Sandy Huckaba
Nancy Rosenbaum Sikes, Soloist

Scripture Psalm 13
James Armstrong, M.D., Ashdown

Reading of names of deceased members of the Auxiliary
Mrs. C. Herbert Taylor, president of the Auxiliary

Scripture Micah 6:6-8
James Armstrong, M.D., Ashdown

Reading of names of deceased members of the Society
Morriss M. Henry, M.D., Society president

Scripture Psalm 121
Herbert Wren, M.D., Texarkana

Benediction – "Lord's Prayer" Malotte
Nancy Rosenbaum Sikes, Soloist

IN MEMORIAM

AUXILIARY MEMBERS

Mrs. Max (Dr. Doris) Baldridge, Heber Springs
Mrs. Bernard Capes, West Helena
Mrs. Charles Chestnut, Little Rock
Mrs. James L. Dennis, Little Rock
Mrs. Frank Gavlas, Dardanelle
Mrs. James M. Kolb, Sr., Clarksville
Mrs. R. C. Kory, Sr., Little Rock
Mrs. L. D. Massey, Memphis, Tennessee (Osceola)
Mrs. Grover Poole, Jonesboro
Mrs. Charles K. Townsend, Marks, Mississippi (Arkadelphia)

SOCIETY MEMBERS

William F. Adams, M.D., Van Buren
John V. Busby, M.D., Little Rock
John W. Cole, M.D., Malvern
Joseph E. Cross, M.D., DeWitt
Frank E. Gavlas, M.D., Dardanelle
Michael N. Harris, M.D., North Little Rock
Ed G. Hopkins, M.D., Van Buren
Lemly L. Hubener, M.D., Blytheville
Albert E. Kalderon, M.D., Little Rock
James D. Kinley, M.D., Beebe
Bill B. Livingston, M.D., Camden
Richard M. Logue, M.D., Little Rock
William J. Rhinehart, M.D., Little Rock
Warren S. Riley, M.D., El Dorado
Lloyd S. Rolufs, M.D., Eureka Springs
Gerald H. Teasley, M.D., Texarkana
L. A. Whittaker, M.D., Fort Smith
Harold B. Wright, M.D., Waldron

Business Sessions

MEETINGS OF THE COUNCIL

The Council of the Arkansas Medical Society will meet daily during the convention at times listed below. All meetings will be held in the Hilton.

Thursday, May 5	9:30 a.m.
Friday, May 6	7:30 a.m.
Saturday, May 7	7:30 a.m.
Sunday, May 8	8:30 a.m.
Sunday, May 8	Immediately following adjournment of the House of Delegates (brief re-organizational meeting and group photograph of new officers)

The voting members of the Council are: the councilors, the president, the first vice president, president-elect, secretary, treasurer, and immediate past president. The speaker, vice speaker, and other past presidents are members ex-officio without vote.

HOUSE OF DELEGATES

The opening session of the House of Delegates of the Arkansas Medical Society will begin at 12:30 p.m. on Thursday, May 5, in the Center for Continuing Education. Speaker of the House of Delegates, Amail Chudy, M.D., will preside.

All items of business to be considered by the House must either be printed in the March issue of the Journal or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during the sessions

of the House of Delegates must have a two-thirds vote of attending delegates for introduction.

Items of business will be referred by the Speaker of the House of Delegates to one of three reference committees. Open hearings on those items of business will be held by the reference committees following the session of the House. All members of the Society are welcome to attend the meetings of the reference committees and to express views on the various reports, resolutions, etc.

AGENDA

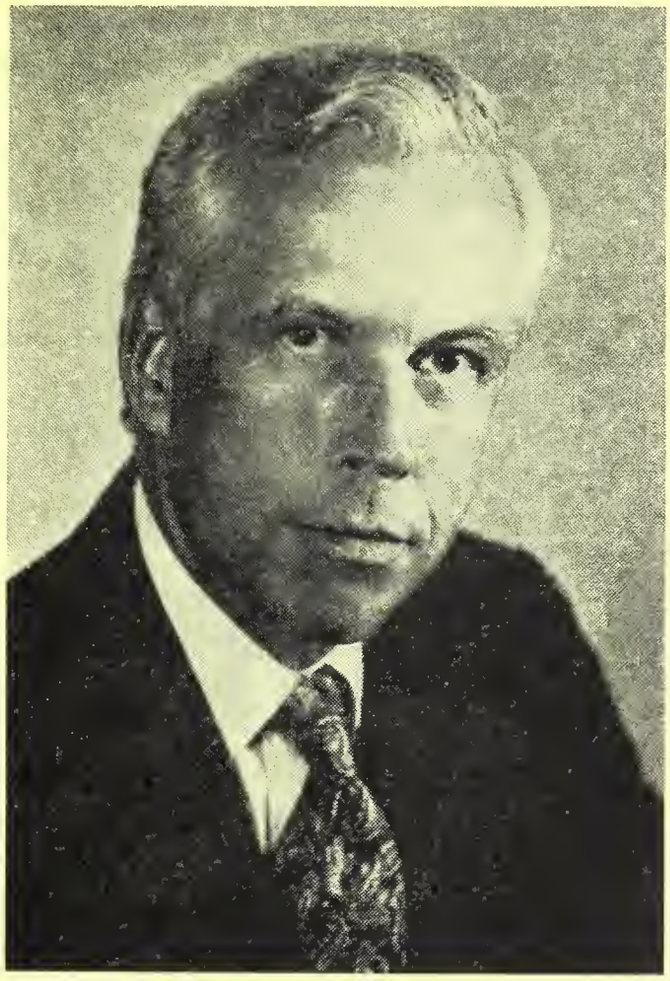
FIRST MEETING, HOUSE OF DELEGATES

12:30 p.m., Thursday, May 5

Amail Chudy, M.D., Speaker

Pat Phillips, M.D., Vice Speaker

1. Call to Order
2. Introduction of Guests:
 Mrs. C. Herbert Taylor, West Memphis, President of the Arkansas Medical Society Auxiliary
 Mrs. Paul Cornell, Little Rock, President-elect of the Arkansas Medical Society Auxiliary
3. Address by James S. Todd, M.D., Ridgewood, New Jersey, Member of the Board of Trustees of the American Medical Association
4. Address by the President of the Arkansas Medical Society, Morriss M. Henry, M.D., Fayetteville
5. Adoption of minutes of the 106th Annual Session as published in the June 1982 issue of the Journal of the Arkansas Medical Society
6. Adoption of minutes of House session held November 14, 1982, as published in the January 1983 issue of the Journal of the Arkansas Medical Society
7. Old Business
 A. S. Koenig, Jr., M.D., Chairman of the Constitutional Revisions Committee, will present proposed amendments to the Constitution and Bylaws for final consideration of the House. (Proposed amendments appear under "House of Delegates Business Affairs" heading in this section of the Journal.)
8. New Business
 A. Report from Constitutional Revisions Committee
 A. S. Koenig, Jr., M.D., Chairman of the Constitutional Revisions Committee, will present proposed amendments to the Bylaws for first reading. After presentation to the House, the proposed amendments will be referred to a reference committee for consideration. (See Report of the Constitutional Revisions Committee which appears under the "House of Delegates Business Affairs" heading in this section of the Journal.)
 B. Report from Legislative Committee
 C. Reports from other Committees
9. Announcements of Vacancies on State Boards
10. Selection of Nominating Committee for Society Officers
 Members of the House will meet by councilor district to select one nominating committee member from each district. The committee elected will select nominations for elections at ath 1984 Annual Session.
11. Recess until Sunday



James S. Todd, M.D.
Ridgewood, New Jersey
Member of the Board of Trustees
American Medical Association

AGENDA

FINAL MEETING, HOUSE OF DELEGATES

10:00 a.m., Sunday, May 8

Presiding: Amail Chudy, M.D., Speaker

Pat Phillips, M.D., Vice Speaker

1. Call to Order
2. Election
3. Reports of Reference Committees
4. Supplemental Report of Council covering convention meetings, John P. Burge, M.D., Chairman
5. Old Business
6. New Business
 1. Nominations for Board positions
 (A) State Medical Board (6th district)
 (B) State Board of Health (3rd district, 6th district, and Member-at-large positions)
7. Adjournment

REFERENCE COMMITTEES

Reference Committees are appointed by the Speaker of the House of Delegates to consider the various reports and resolutions. Reports published in the March

issue of the Journal, as well as any reports and resolutions presented at the first meeting of the House on May 5, will be referred by the Speaker to the reference committees. The committees hold open hearings immediately following the House of Delegates session on Thursday. After the open hearings, the reference committees will hold executive sessions for the purpose of preparing recommendations and reports for the House of Delegates. Reports of the Reference Committees will be acted upon by the House of Delegates at the Sunday session.

STATE BOARD VACANCIES

Arkansas State Medical Board

A vacancy occurs in the Sixth Congressional District position on the Arkansas State Medical Board. Members from the counties in the district are urged to meet immediately following adjournment of the House of Delegates meeting on Sunday to vote for nominees. Nominations should be reported to the convention registration desk (only one nomination is required).

Frank Burton, M.D., Hot Springs, is currently serving a term which will expire December 31, 1983. He is eligible for reappointment.

Counties in the Sixth Congressional District are: Arkansas, Chicot, Cleveland, Dallas, Desha, Drew, Garland, Grant, Hot Spring, Jefferson, Lincoln, Lonoke and Saline.

Arkansas State Board of Health

Vacancies will occur December 31, 1983, in the Third and Sixth Congressional District positions and the member-at-large position on the Board of Health. Three nominations are required for each position. Those presently serving are eligible for reappointment.

The member-at-large position is now held by Robert D. Miller, M.D., of Helena. Nominations for this position are selected by the Nominating Committee of the Society.

Members from the counties in the Third and Sixth Congressional Districts will meet to select nominees for the Board positions. The meetings will be held by district immediately following adjournment of the House of Delegates session on Thursday. Members presently serving on the Board and the counties in the districts are:

Third District: A. Samuel Koenig, III, M.D., Fort Smith

Counties in District: Baxter, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Van Buren and Washington.

Sixth District: Howard R. Harris, M.D., Dumas

Counties in District: Arkansas, Chicot, Cleveland, Dallas, Desha, Drew, Garland, Grant, Hot Spring, Jefferson, Lincoln, Lonoke and Saline.

ARKANSAS FOUNDATION FOR MEDICAL CARE

The Board of Directors of the Arkansas Foundation for Medical Care will meet at 3:00 p.m. on Saturday, May 7, in the Hilton Hotel.

The annual meeting of the Foundation will follow the Board meeting, beginning at 4:00 p.m.

ARKANSAS MEDICAL SOCIETY POLITICAL ACTION COMMITTEE

The Board of Directors of the Arkansas Medical Society Political Action Committee will meet at 3:00 p.m. on Saturday, May 7, in the Hilton Hotel.

ARKANSAS STATE BOARD OF HEALTH

The Arkansas State Board of Health will hold a luncheon meeting on Friday, May 6, in the Hilton Hotel.

MALPRACTICE LOSS CONTROL

Audiovisual programs on malpractice loss control will be presented Thursday afternoon from 1:00 p.m. to 5:00 p.m., from 8:00 to 9:00 a.m. on Friday, and from 12:30 p.m. to 1:30 p.m. on Friday. These programs are sponsored by the Society and the American Physicians Insurance Exchange. API personnel will be available to answer questions.

Scientific Exhibits

J. Darrell Bonner, M.D., of Paragould, Chairman for the Scientific Exhibits, has arranged a number of interesting scientific exhibits. Exhibits will be located in an area adjacent to the scientific lectures. All members are encouraged to visit the exhibits as they are an integral part of the scientific program.

The following exhibits will be on display:

"Small Fenestra Stapedectomy"
Ted Bailey, M.D., Jim Pappas, M.D., and Sharon S. Graham, M.A., Little Rock

"Acoustic Tumors"
John R. E. Dickins, M.D., Little Rock

"Facial Plastic Surgery in Otolaryngology"
Joe B. Colclasure, M.D., Little Rock

"Helps for the Blind"
R. Sloan Wilson, M.D., Little Rock

"Juvenile Polyps of the Colon"
Ralph B. Bergeron, M.D., Little Rock

"Ultrasound Diagnosis of Multiple Cystic Encephalomalacia"
Michael W. Stannard, M.D., Little Rock

"Office D & C"
Northwest Arkansas Health Education Center, Fayetteville

"Macular Degeneration"
James R. McNair, M.D., Little Rock

"Total Hip and Knee Replacement Arthroplasty"
D. Bud Dickson, M.D., Little Rock

"Arthroscopic Surgery of the Knee"
D. Bud Dickson, M.D., Little Rock

"Arthroscopic Surgery of the Shoulder"
D. Bud Dickson, M.D., Little Rock

"Skin Cancer"
Spencer D. Allbright, III, M.D., Fayetteville

"Infant Restraints"
John Trieschmann, M.D., Hot Springs

Distinguished Guests

Raymond Bauer, M.D., Tyler, Texas

Eugene F. Binet, M.D., Professor of Radiology, University of Arkansas College of Medicine, Little Rock

Warren C. Boop, M.D., Professor of Neurosurgery, University of Arkansas College of Medicine, Little Rock

Jerome D. Cohen, M.D., Associate Professor of Internal Medicine and Assistant Professor of Community Medicine, St. Louis University School of Medicine

William M. Chadduck, M.D., Associate Professor of Neurosurgery, University of Arkansas College of Medicine, Little Rock

E. J. Chaney, M.D., Immediate Past President, American Academy of Family Physicians, Belleville, Kansas

Michael Davis, M.D., Department of Radiology, University of Texas Medical Branch, Galveston

Patricia Dix, M.D., Department of Obstetrics and Gynecology, Bowman-Gray School of Medicine, Winston-Salem, North Carolina

James A. Franciosa, M.D., Director of Cardiovascular Division, University of Arkansas College of Medicine and Veterans Administration Hospital, Little Rock

Dennis D. Lucy, Jr., M.D., Professor and Chairman, Department of Neurology, University of Arkansas College of Medicine, Little Rock

Allen R. Myers, M.D., Department of Medicine, Temple University Health Sciences Center, Philadelphia

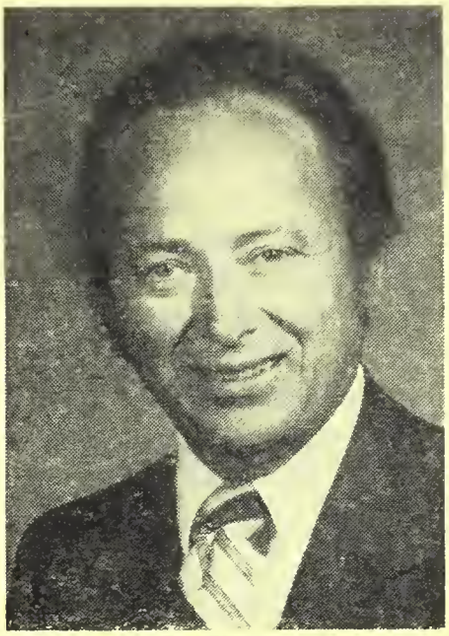
Godfrey P. Oakley, Jr., M.D., Director of Birth Defects Surveillance, Communicable Disease Center, Atlanta, Georgia

David W. Robinson, M.D., Department of Plastic Surgery, University of Kansas Medical Center, Kansas City

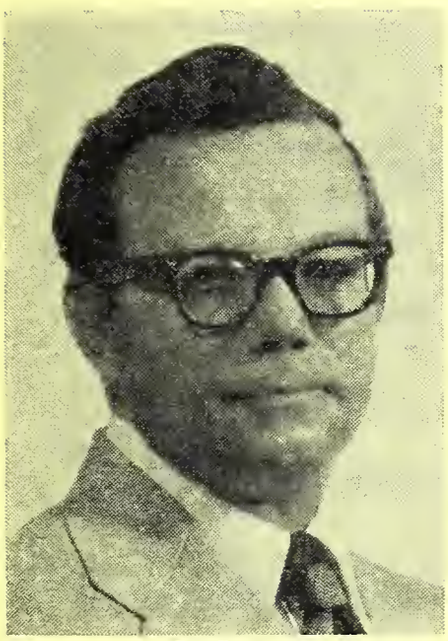
J. S. Schinfeld, M.D., Department of Obstetrics-Gynecology, University of Tennessee Center for Health Sciences, Memphis



Dr. Lucy



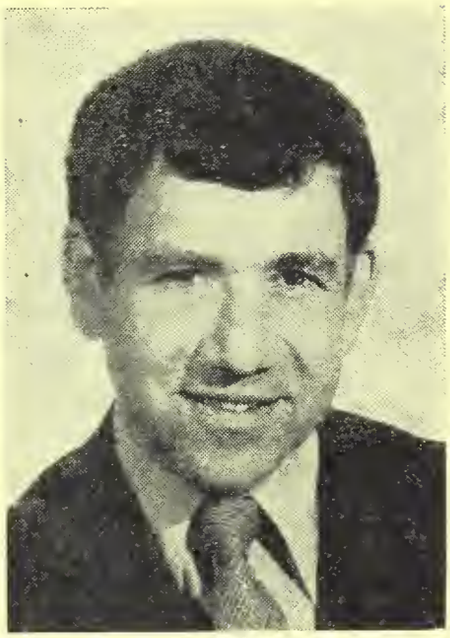
Dr. Chaney



Dr. Boop



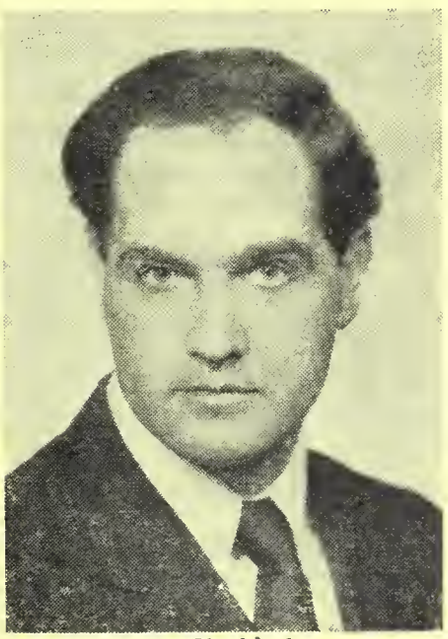
Dr. Robinson



Dr. Cohen



Dr. Bauer



Dr. Chadduck

Scientific Program

GENERAL SESSION

Program Theme:

"Old and New — A Delicate Blend"

Friday Morning Session

Presiding: Paul Wallick, M.D., First Vice President

9:00 a.m. "Burns — Historical and Modern Perspective," David W. Robinson, M.D.

9:30 a.m. "Birth Defects Surveillance," Godfrey P. Oakley, Jr., M.D.

10:00 a.m. Intermission — visit exhibits

10:20 a.m. "Sexual Dysfunction — Its Causes and Treatment," Raymond Bauer, M.D.

10:50 a.m. "Update on Estrogen Replacement Therapy," J. S. Schinfeld, M.D.

11:20 a.m. (to be announced)

Friday Afternoon Session

Presiding: A. Samuel Koenig, III, M.D., Second Vice President

1:30 p.m. "Hypertension — The Delicate Balance," Jerome D. Cohen, M.D.

2:00 p.m. "Treatment of Hypertension and Congestive Heart Failure," James A. Franciosa, M.D.

2:30 p.m. Intermission — visit exhibits

3:00 p.m. Mini-Symposium on Cerebral Vascular Disease

3:00 p.m. "Diagnosis and Classification of Ischemic Cerebral Lesions," Dennis D. Lucy, Jr., M.D.

3:20 p.m. "Differential Diagnosis of Lesions Simulating Ischemic Cerebral Events," William M. Chadduck, M.D.

3:40 p.m. "Neuroradiology of Cerebral Vascular Disease: An Update," Eugene F. Binet, M.D.

4:00 p.m. "Surgical Treatments for Cerebral Vascular Disease," Warren C. Boop, Jr., M.D.

4:20 p.m. Panel Discussion and Questions: Drs. Lucy, Chadduck, Binet and Boop
Moderator: Dr. Chadduck

Saturday Morning Session

Presiding: Gerald L. Guyer, M.D., Third Vice President

9:00 a.m. "Family Practice, A New Perspective," E. J. Chaney, M.D.

9:30 a.m. "Identification of the High Risk Obstetrical Patient," Patricia Dix, M.D.

10:00 a.m. Intermission

10:20 a.m. "Current Status of GI Radiology," Michael Davis, M.D.

10:50 a.m. "Rheumatoid Arthritis — Up to Date Treatment," Allen R. Myers, M.D.

Group and Specialty Meetings

Friday, May 6

The **Arkansas Chapter of the American College of Surgeons** will have a luncheon meeting at 12:15 p.m. on Friday, May 6. David Robinson, M.D., with the Department of Plastic Surgery at the University of Kansas Medical Center in Kansas City, will speak on "Evolution of Skin Grafting."

Saturday, May 7

The **Arkansas Academy of Ophthalmology** will meet at 8:30 a.m. on Saturday, May 7. David Wilkes, M.D., with the Department of Ophthalmology at the University of Arkansas College of Medicine in Little Rock, will speak on "Diagnosis and Surgical Management of Lacrimal Disorder." A luncheon and business meeting will follow the scientific session.

Otolaryngology — Head and Neck Surgery Section will have a scientific program beginning at 9:00 a.m. on Saturday, May 7. The program will consist of specific problem cases and state of the art discussions presented by members of the section. A business session and luncheon will follow.

The **Arkansas Section, American College of Obstetricians and Gynecologists** will meet at 12:15 noon on Saturday, May 7, for a luncheon and scientific program. Speaker will be Patricia Dix, M.D., with the Department of Obstetrics and Gynecology at Bowman-Gray School of Medicine in Winston-Salem, North Carolina.

The **Arkansas Society of Internal Medicine** will have a luncheon meeting and socio-economic program on Saturday, May 7, beginning at 12:00 noon. Guest speaker will be George K. Mitchell, President and Chief Executive Officer of Arkansas Blue Cross-Blue Shield.

The **Arkansas Orthopaedic Society** will have a luncheon meeting beginning at 12:00 noon on Saturday, May 7. There will be a business meeting in connection with the luncheon.

The **Arkansas Chapter, American College of Radiology** will have a scientific program and luncheon beginning at 12:15 p.m. on Saturday, May 7. Guest speaker will be Michael Davis, M.D., of the University of Texas at Galveston. Dr. Davis will expand on his presentation for the general session on GI Radiology.

The **Arkansas Academy of Family Physicians** will meet on Saturday, May 7, at 12:30 p.m. A scientific program, luncheon and business session is planned. E. J. Chaney, M.D., of Belleville, Kansas, immediate past president of the American Academy of Family Physicians, will speak.

The **Arkansas Society of Pathology** will hold a luncheon meeting and business session beginning at 12:30 p.m. on Saturday, May 7.

The **Arkansas Urologic Society** will meet on Saturday, May 7, beginning with cocktails at 11:30 a.m. Following luncheon, a scientific program will be presented with Alan Wein, M.D., as guest speaker. Dr. Wein is Chairman of the Division of Urology at the University of Pennsylvania School of Medicine.

The **Arkansas Society of Plastic and Reconstructive Surgeons** will have a business meeting with election of officers on Saturday, May 7. The 12:30 p.m. luncheon meeting will be held in the Martha Fulbright Suite at the Hilton.

Arkansas Medical Society Auxiliary

FIFTY-NINTH ANNUAL SESSION
May 5-8, 1983
Hilton Hotel, Fayetteville
Convention Chairmen

General Chairman: Mrs. E. Mitchell Singleton, 1556 Clark, Fayetteville (521-3340)

Registration and Credentials Chairman: Mrs. W. Ely Brooks, Route 2, Springdale (751-0196)

Friday's Luncheon Chairman: Mrs. James A. Capps, Jr., 608 Carlton, Springdale (751-7490)

Saturday's Luncheon Chairman: Pulaski County — Mrs. D. B. Allen (225-7988)

Saturday's Luncheon Liaison: Mrs. George R. Cole, Jr., 2121 Old Wire Road, Fayetteville (521-1838)

Transportation Chairman: Mrs. Earl B. Riddick, Jr., 1511 Woodbrook, Fayetteville (521-3101)

Hostesses for our Guests: Mrs. James E. Haynes, 1400 Canterbury, Fayetteville (443-3352)
Mrs. Clifford C. Councille, Jr., 664 Cliffside, Fayetteville (521-6113)

Publicity: Mrs. Tom D. Whiting, 207 Edgewood, Springdale (756-3634)
Mrs. J. Darrell Bonner, 1600 Barnhill Road, Paragould (239-5311)

Reading: Mrs. A. Pat Chambers, 2601 Fresno Place, Fort Smith (646-5964)
Mrs. W. P. Phillips, 2821 South 58th, Fort Smith (452-2862)

Resolutions: Mrs. John Garrett, Post Office Box 369, Gravette (787-5937)

Flower Chairman: Mrs. William R. McNair, Jr., 1701 Applebury Drive, Fayetteville (521-1928)

Tennis and Golf Chairman: Mrs. R. W. Dow, 571 Rockcliff, Fayetteville (521-1928)
Mrs. Stephen P. Johnson, 2842 Stanton, Fayetteville (521-4644)

Hospitality Room: Mrs. James D. Pickett, 855 Pembroke, Fayetteville (521-0433)

Babysitting: Mrs. Jim D. Sharp, 988 Applebury, Fayetteville (521-4948)

Tours: Mrs. Harold A. Decker, 2823 Hyland Park Road, Fayetteville (443-5157)

Registration

Thursday, May 5	1:00 p.m. to 6:15 p.m.
Friday, May 6	8:00 a.m. to 12:00 noon
Saturday, May 7	8:00 a.m. to 10:00 a.m.

Tickets will be sold at the Registration Desk

CONVENTION PROGRAM

Thursday, May 5

1:00 p.m. to 6:00 p.m. Hospitality Room, Stone Suite (302)

2:30 p.m. Pre-Convention Board Meeting, Blossum Suite (202)
Combined 1982-1983, 1983-1984 Boards
Refreshments served

7:00 p.m. Cocktail party hosted by Arkansas Blue Cross-Blue Shield

Friday, May 6

7:00 a.m. Exercise to Music and Dance — Led by Susan Mayes, M.S.E., Instructor of Dance and Physical Education, University of Arkansas

Every age is welcomed for fun, fun, and more fun. Wear loose clothing. Also, bring your bathing suit to take advantage of the Hilton's indoor-outdoor pool, which is located next to the exercise room on the first floor. The pool is open for the entire convention, but there are no lifeguards. There are dressing rooms next to the pool. You may want to take a quick swim before your next event.

8:00 a.m. Past Presidents' Breakfast, Pike Room
Mrs. Walter Mizell and Mrs. C. W. Jones, Sr., Co-Chairmen

8:15 a.m. Continental Breakfast, Sequoyah I

8:30 a.m. to 10:30 a.m. Hospitality, Stone Suite (302)

9:15 a.m. Opening General Session, Sequoyah I
Mrs. C. Herbert Taylor, Presiding

Invocation: Mrs. Michael Platt, Chaplain

Auxiliary Pledge

Welcome: Mrs. Harold Decker

Response: Mrs. Richard Lombardo

Roll Call and Seating of Delegates

Minutes

Greetings from Southern: Mrs. William D. Hughes, President, Southern Medical Association Auxiliary

Convention Announcements: Mrs. Mitchell Singleton, Convention Chairman

Report of Past Presidents' Breakfast

Highlights of National Legislation: Mrs. Kemal Kutait, AMA Auxiliary Legislative Chairman

Report of Board of Directors

Reports of Officers and Committee Chairmen

Unfinished Business

Tax Status

New Business

Election of Nominating Committee

Election of Delegates and Alternate Delegates to the 1983 Convention of the American Medical Association Auxiliary, June 19-22

11:00 a.m. Adjournment

11:00 a.m. Leave for Luncheon — Dress Casual

Dr. and Mrs. W. Ely Brooks have graciously opened their lovely home on War Eagle Lake for our luncheon.

Transportation will be provided. Everyone needing a ride should meet in front of the hotel.

Hostesses: Washington County

Invocation: Mrs. Charles F. Cale, President-elect Washington County

Guest Speaker: Pattie Williams, M.E.D., C.R.C.
Private Practitioner in Counseling
"Stress Management"
Pattie is a group leader with ten years experience in mental health settings, including community agency and private practice

1:30 p.m. Tours leave from the Brooks' residence (pre-registration necessary)

7:00 p.m. "Hogwild" party with the Arkansas Medical Society

Saturday, May 7

8:30 a.m. Continental Breakfast, Sequoyah I

9:15 a.m. Second General Session, Sequoyah I
Mrs. C. Herbert Taylor, Presiding
Invocation: Mrs. Michael Platt
Auxiliary Pledge
Roll Call and Seating of Delegates
Introduction: Mrs. Wayne C. Brady, Treasurer, American Medical Association Auxiliary
Minutes of First General Session
Reports of Counties: District Vice Presidents serving as moderators
Northeast: Mrs. Richard Martin
Northwest: Mrs. Jimmy Haynes
Southeast: Mrs. R. E. Glasscock
Southwest: Mrs. J. C. Callaway
Convention Announcements: Mrs. Mitchell Singleton, Convention Chairman
Unfinished Business
New Business
Report of Nominating Committee: Mrs. Charles Wilkins, Chairman
Election of Officers
Courtesy Resolution Chairman: Mrs. John Garrett

11:30 a.m. Society-Auxiliary Memorial Service

12:15 p.m. Luncheon, Fayetteville County Club
Hostess: Pulaski County, Mrs. D. B. Allen
Presentation of Membership Awards: Mrs. Paul Cornell, Membership Chairman
Presentation of AMA-ERF Awards: Mrs. Paul Meredith, AMA-ERF Chairman
Presentation of Doctor's Day Awards: Mrs. Frank Morgan, Councilor, SMA Auxiliary
Installation of Officers: Mrs. Warren C. Boop, Jr.
President's Message: Mrs. Paul Cornell

Saturday afternoon Shopping on the Square

7:00 p.m. Arkansas Medical Society Inaugural Ceremony and Reception

Sunday, May 8

7:30 a.m. Prayer Breakfast with Arkansas Medical Society

10:30 a.m. Post-Convention Board Meeting, Blossum (202)
Continental Breakfast

PRE-REGISTRATION FORM

Detach Here

Yes, I plan to attend the Arkansas Medical Society Auxiliary Convention May 5-8, 1983, in Fayetteville, Arkansas.

Please register me as a:
- _____ Delegate
- _____ Alternate Delegate
- _____ Guest
- _____ Other

I need to pre-register for:
- _____ $9.00 Luncheon, War Eagle Lake, Friday, May 6
 Hostesses: Washington County
- _____ $10.00 Installation Luncheon, Fayetteville Country Club
 Hostesses: Pulaski County

I am interested in the Friday afternoon activity of:
- _____ Tour: "Antiques and Eureka Springs" (no charge)
- _____ Tour: "Architectural Homes, Past and Present" (no charge)
- _____ Tennis: Summerhill Racquet Club, $3.15 court, outside
- _____ Golf: Paradise Valley, Cart Fee $10.48/18 holes Green Fee: $10.40
- _____ Walking Tour of Historic Downtown Fayetteville (no charge)
 Transportation provided

Please indicate if you are interested in Babysitting Services. The hotel is providing a room and we will supply the sitters. _____ Yes _____ No

NAME _____

ADDRESS _____

CITY _____

Please return this form with your pre-payment no later than April 15, 1983, to the Arkansas Medical Society Auxiliary. You may pick up your tickets and badges at the Registration Desk.

c/o Mrs. Ely Brooks
Route #2, Box 367-A2
Springdale, Arkansas 72764

Technical Exhibits

The business firms who purchase exhibit space at our Annual Session contribute a great deal to the financing as well as to the educational aspects of the meeting. The number of visits to the technical exhibits is the only criterion by which these companies can judge the value they receive from the investment in booth rental, displays and employees' time. You will be rewarded for the time you spend visiting the exhibits. Following are descriptions of displays to be featured.

CIBA

CIBA representatives will be in booth #1 to discuss the Transdermal delivery of medication.

MERCK SHARP & DOHME

Merck Sharp & Dohme cordially invites you to visit their exhibit featuring several products from their extensive line of pharmaceuticals. Representatives in attendance will be pleased to answer any questions you may have. Inquiries about our professional, informational, and educational services are welcomed.

BRISTOL LABORATORIES

You are cordially invited to visit Bristol Laboratories' exhibit. Our representatives at the booth welcome the opportunity to answer your questions concerning the Bristol line of products featuring: Amikin® (amikacin sulfate); Bristoject® (Bristol Emergency Medication System); Bufferin® with Codiene #3 (each tablet contains 325 mg. aspirin, 48.6 mg. aluminum glycinate, 97.2 mg. magnesium carbonate and 30 mg. codeine phosphate); Cefadyl® (sterile cephapirin sodium); The Naldecon® Line (antihistamine decongestant) /EX Ped Drops/DX Ped Syrup/CX Suspension; Salutensin®/Salutensin-Demi™ (hydroflumethiazide and reserpine); Stadol® (butorphanol tartrate); Tegopen® (cloxacillin sodium); and Ultracef® (cefadroxil).

BOEHRINGER INGELHEIM, LTD.

Representatives will be on hand to answer questions about any of our ethical pharmaceuticals.

MERRILL LYNCH PIERCE FENNER AND SMITH, INC.

You are invited to stop by our booth to visit with representatives on hand regarding your investments.

CUMMINGS X-RAY COMPANY, INC.

X-Ray equipment, x-ray film processors, and other x-ray supplies and accessories will be on display in booth #5.

A. H. ROBINS COMPANY

You are cordially invited to visit the A. H. Robins exhibit and meet our representatives who will welcome the opportunity to discuss our products: Reglan, Micro-K, Quinidex, and Dimetapp.

DODSON INSURANCE GROUP

Dodson offers a proven service for physicians to reduce their cost for Workers' Compensation insurance. The Savings Plan has been in effect since 1973 with approval of the Arkansas Medical Society. Returns of premium have ranged between 30% and 38% per year in eight of the past nine years.

SOUTHERN MEDICAL ASSOCIATION

Stop by our booth and receive a free gift. Information is available on Regional Postgraduate Conferences, Medical Malpractice Seminars, Leadership Seminars, and the Annual Scientific Assembly. Also, material is available on fringe benefit programs, such as Keogh Plan, Retirement Plan, IRA, Insurance, Research Project Fund, Loans and Scholarships.

STUART PHARMACEUTICALS

STUART PHARMACEUTICALS welcomes members and guests to the meeting of the ARKANSAS MEDICAL SOCIETY. We extend a cordial invitation to visit our exhibit where the following products are on display and literature is available. Our representatives will be glad to answer any questions and accept sample requests.

TENORMIN® (atenolol), the only beta blocker with *both* one-tablet-a-day dosage and cardioselectivity.

SORBITRATE® (isosorbide dinitrate) — your first choice for organic nitrate therapy.

MYLANTA®-II antacid/antiflatulent — alone or added to an H_2 antagonist, it works in ulcer therapy.

ADRIA LABORATORIES, INC.

ADRIA Labs will exhibit pharmaceutical products of interest to physicians of all specialty groups.

SOUTHERN CONTROL SYSTEMS, INC.

The PHYSICIAN'S OFFICE COMPUTER is a total "In House" medical office system. The system almost always pays for itself within three to twelve months of installation. It will print insurance forms, both universal and state medical, print patient statements automatically at the rate of four per minute, print a daily report of all charges and cash report with a bank-ready deposit slip, produce aged accounts receivable report at any time, and perform a data search using any combination of diagnosis, procedure, age, sex, doctor, provider, zip code, insurance company, date of service and medication.

ARKANSAS BLUE CROSS-BLUE SHIELD

Visit the Arkansas Blue Cross and Blue Shield exhibit to discuss any aspect of the voluntary Preferred Payment Plan. You will also have the opportunity to meet the Professional Services representative assigned to your area.

AMERICAN PHYSICIANS INSURANCE

API is a physician owned and operated malpractice, life and disability insurance company. Will detail their insurance products including the new disability income. The APS 3 in-house micro computer system for physicians will also be displayed.

DEAN WITTER REYNOLDS, INC.

Dean Witter Reynolds, Inc. can offer whatever your needs may require for Financial Planning and reaching

your financial objectives. Investment Bankers for Today and Tomorrow's needs.

MED-COMP, INC.

Med-Comp, Inc., has the most sophisticated state of the art computer system designed for the management of professional offices — specifically for the practice of ophthalmology and other medical specialities. Totally integrated with a full range of capabilities including: Patient Registration, On-line Medical Records, Scheduling and many more.

FIRST VARIABLE LIFE INSURANCE COMPANY

Specialists in the investment, design, and implementation of Pension and Profit Sharing Plans.

The Investment Accounts managed by First Variable continue to provide consistent above-average investment results. Whether you want a guaranteed rate of return, a High Yield Bond Account, or a Common Stock Investment, First Variable has the performance record.

Retirement Systems offer complete actuarial and plan administrative services on a fee-only basis.

Come by our booth and see how you can benefit from our experience.

ST. PAUL FIRE AND MARINE
INSURANCE COMPANY

The St. Paul Fire & Marine is pleased to be involved in the Medical Society convention this year. We will have an exhibit booth in which we will provide brochures of interest to you in the medical field and also will provide atlases for anyone who might wish to have one. In addition, our booth will be manned by personnel in Underwriting, Claims and Risk Management who will be most happy to discuss any particular area.

NORWICH EATON PHARMACEUTICALS, INC.

Your Norwich Eaton representatives wish you a successful 1983 meeting. Complete information on Norwich Eaton products and professional services is available at the Norwich Eaton exhibit.

RATHER, BEYER & HARPER

Representatives of Rather, Beyer & Harper will have brochures and all information on the Arkansas Medical Society's group insurance plans. The Income Protection Plan, which has been in effect since 1947, is now being issued on a guaranteed renewable basis. Income Protection Benefits are now up to $2,167 per month. Records will be available so that each physician may review his insurance coverages and what he is eligible to apply for as a member of the Arkansas Medical Society.

SMITH KLINE & FRENCH LABORATORIES

Representatives will be on hand to answer your specific questions and to provide information on our products and services.

UNITED STATES ARMY RESERVES
MEDICAL DEPARTMENT

Our representatives will have a display board with information for physicians in the United States Army Reserves in booth #25.

AYERST LABORATORIES

Ayerst Laboratories invites members and guests of the Arkansas Medical Society to visit our exhibit where our representatives will answer your questions concerning Inderal Inderide, Premarin, and Riopan.

MOORE BUSINESS SYSTEMS

Moore Business Systems offers a totally unique and important concept that has become a key to our continued success and customer satisfaction. We sell and support complete business solutions — including hardware, software, documentation, training, installation, service, and all necessary computer forms and supplies.

ARKANSAS WHEELCHAIRS, INC.

Arkansas Wheelchairs, Inc., carries a complete selection of wheelchairs, from power-driven models to the children's chairs, plus many other specialty items for the handicapped individual.

UNITED STATES AIR FORCE

The UNITED STATES AIR FORCE has unique opportunities for certain specialities to practice their skills without problems of extensive paperwork, overhead, malpractice or long working hours. Aim high — join an elite health service team and a great way of life.

SAFEGUARD BUSINESS SYSTEMS

Our representatives will be on hand to discuss one-write accounting systems, quick claim insurance forms, data processing reports for cash control and decision-making in managing your office.

NATIONAL MEDICAL RENTALS, INC.

Come by booth #35 to see how NATIONAL MEDICAL RENTALS, INC., serves the home health care needs of Arkansas with hospital equipment, oxygen and breathing related items for the patient at home.

E. R. SQUIBB & SONS, INC.

Squibb representatives will be available to discuss with you the pharmaceutical products offered by our firm.

LINDE HOMECARE MEDICAL SYSTEMS, INC.

We will have a complete line of oxygen and therapy equipment for the patient in the home. Come by our booth and get full information from our representatives.

AMERICAN MEDICAL MANAGEMENT

Exhibit will consist of information on available physician practice opportunities in the communities served by our affiliated hospitals in Arkansas.

House of Delegates Business Affairs

Business items printed below are brought to the attention of individual members and the county medical societies. The items reported here represent those received in time for publication in advance of the meeting. All reports will be referred to reference committees. Members are urged to attend the open hearings of the reference committees to express their views. Reference committee hearings are scheduled for 2:30 p.m. on Thursday, May 5.

OLD BUSINESS

The following proposed changes in the Society Constitution and Bylaws were approved by the House of Delegates on first reading in April 1982. If approved by the House of Delegates at the 1983 meeting, the changes become effective at that time.

ARTICLE IV. Constitution
Section 3, Delegates

Delegates shall be those members who are elected *or seated* in accordance with the Constitution and Bylaws to represent their respective component societies in the House of Delegates of this Society.

ARTICLE V. Constitution. House of Delegates.

The House of Delegates shall be the legislative body of the Society, and shall consist of (1) delegates elected by the component societies *or seated by the House of Delegates to represent component societies* as provided in these bylaws; (2) the councilors, and (3) ex-officio, the president, first vice president, president-elect, speaker, vice speaker, secretary, treasurer, and past president of the Society, provided, however, that the ex-officio members shall have the power of voting on all subjects except the election of officers.

BYLAWS. CHAPTER 1. Membership
(A) Active Membership

The active membership of this Society shall be comprised of all the active members of its component societies. Only such person is eligible for active membership in a component society as possesses the degree Doctor of Medicine *or Doctor of Osteopathy* and holds an unrevoked license to practice medicine and surgery issued by the (delete: Board of Medical Examiners which consists of members recommended by this Society) *Arkansas State Medical Board.* The eligibility requirements set forth in the preceding sentences are not to apply, however, (delete: to members in good standing in any component society at the time of the adoption of this section. Adopted, House of Delegates, 1961 Annual Session, nor) to the members of the specially chartered "Student and Intern and Resident Societies."
(Note: Words in italics are additions to the present section.)

NEW BUSINESS

Nominating Committee
Frank E. Morgan, M.D., Chairman

The Nominating Committee presents the following nominations for the officers of the Arkansas Medical Society for the year 1983-1984:

President-elect: Charles Wilkins, Jr., M.D., Russellville
A. E. Andrews, M.D., Texarkana

First Vice President: Warren Douglas, M.D., Little Rock

Second Vice President: Charles H. Rodgers, M.D., Little Rock

Third Vice President: James L. Gardner, M.D., Hot Springs

Secretary: Elvin Shuffield, M.D., Little Rock

Treasurer: James M. Kolb, Jr., M.D., Russellville

Delegate to AMA (Term—January 1984 to December 1985): T. E. Townsend, M.D., Pine Bluff

Alternate Delegate to AMA (Term—January 1984 to December 1985): W. Payton Kolb, M.D., Little Rock

Delegate to AMA (Term — January 1983 to December 1984): A. E. Andrews, M.D., Texarkana

Alternate Delegate to AMA (Term—January 1983 to December 1984): George W. Warren, M.D., Smackover

Alternate Delegate to AMA (Term—January 1983 to December 1984): Richard Pearson, M.D., Rogers

Speaker of House: Amail Chudy, M.D., North Little Rock

Vice Speaker of House: Paul Wallick, M.D., Monticello

For Councilors:

District 1: M. J. Osborne, M.D., Blytheville
District 2: Jim E. Lytle, M.D., Batesville
District 3: John Hestir, M.D., DeWitt
District 4: Lloyd Langston, M.D., Pine Bluff
District 5: George W. Warren, M.D., Smackover
District 6: F. E. Joyce, M.D., Texarkana
District 7: Edgar K. Clardy, M.D., Hot Springs
District 8: W. Ray Jouett, M.D., Little Rock
Charles W. Logan, M.D., Little Rock
District 9: Richard Pearson, M.D., Rogers
District 10: W. P. Phillips, M.D., Fort Smith

ANNUAL COMMITTEE REPORTS

Committee on Cancer Control

John R. Broadwater, M.D., Chairman

At the last meeting of the Arkansas Medical Society, a resolution presented by this Committee was approved, endorsing the Cancer Program, Commission on Cancer, American College of Surgeons.

This recommendation was approved by the Medical Society. Purpose of this recommendation was to encourage all hospitals with 100 or more beds to seek to establish the Cancer Program of the American College of Surgeons.

During the past year, various members of this Committee, along with representatives of the American Cancer Society, have worked to accomplish the above objective. Significant progress has been made.

On prior occasions, this Committee has recommended the re-establishment of a central Tumor Registry. It is now the feeling that if the above program can be successfully accomplished, that most of the purposes of a central Registry would be completed. At the current time, it is likely not feasible to re-establish a central Tumor Registry.

There are no other reports or recommendations from this Committee for this year.

Committee on Hospitals

E. Z. Hornberger, Jr., M.D., Chairman

On October 14, 1982, I polled the members of the Committee on Hospitals requesting any information or desire from them for a meeting of the Committee. I had no response from the members, so I assumed that there was no need for the Committee to meet. In addition, there has been no specific assignment from the officers of the Medical Society to our Committee.

Constitutional Revisions Committee

A. S. Koenig, Jr., M.D., Chairman

At its November 1982 meeting, the Council of the Society referred to the Constitutional Revisions Committee a request from the Nominating Committee for review of provisions on election of officers. Since the report of the Nominating Committee must now be submitted approximately two months before the election of officers, the Committee felt it was not realistic to continue to follow rules established for the old system for elections. The Constitutional Revisions Committee was asked to draft proposed amendments.

The Committee met following the winter meeting on November 14th. It makes the following recommendations for consideration of the House of Delegates:

(1) Delete Chapter V, Section 3, of the Bylaws, which reads as follows:
"Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years".

(2) Chapter V, Section 4, now reads:
"No member shall be eligible to any office of this Society who is not in attendance at the meeting at which the election is held".
The following addition to that section is proposed:
"Exceptions may be made by the House of Delegates if the nominee is unable to be present because of circumstances beyond his control".

(3) Subsequent sections of Chapter V would be renumbered after deletion of Section 3.

Sub-Committee on Liaison with Vocational Rehabilitation

Jim Lytle, M.D., Chairman

The Sub-Committee on Liaison with Vocational Rehabilitation met on Sunday, November 14, 1982, in the Camelot Inn, Little Rock. Present were committee members Jim Lytle, M.D., and C. E. Tommey, M.D., Rehabilitation Services representatives Howard Schwander, M.D., Mr. Russell Baxter, Mr. Jerry Miller and Mr. Vince Bond.

The membership of the Medical Advisory Committee was reviewed and recommendations made for appointments to replace physicians who had died or retired from practice.

The Rehabilitation Services expressed appreciation to the Society for being supportive of its program.

The Rehabilitation Service announced that the Blue Cross-Blue Shield usual, customary and reasonable fee level would be applicable for Rehabilitation Services effective January 1st.

Annual Session Committee
Paul Wallick, M.D., Chairman

The Annual Session Committee met in the fall of 1982 to plan the 1983 annual meeting. Twelve members of the committee participated in the meeting, along with one of the councilors for the sixth district. The sixth district has hosting responsibilities for the meeting this year, in accordance with the rotation system established a number of years ago.

The committee reviewed suggestions for the program theme and selected "Old and New—A Delicate Blend". General discussion of the scientific program was held and the chairman was authorized to make the final decision on the scientific program.

The councilors from the sixth district accepted responsibility for the Memorial Service and hosts for guests of the Society during the convention.

The general format of the convention was reviewed, and the committee approved the following:

(1) Scheduling the Prayer Breakfast on Sunday rather than Saturday

(2) Scheduling the Presidents' Breakfast for Saturday morning, with the current president to be included.

(3) Holding the joint Society-Auxiliary Memorial Service at 11:30 A.M. on Saturday, rather than on Sunday morning.

(4) Having a "hogwild" party on Friday evening.

(5) Including entertainment for the inaugural program and following the preference of the incoming president on the type of function scheduled.

Scientific exhibits for the 1983 meeting are being arranged by Dr. J. Darrell Bonner of Paragould.

Details on the convention activities appear elsewhere in this issue of the Journal.

Professional Relations Committee for First Councilor District
B. P. Raney, M.D., Chairman

The First District Professional Relations Committee met once in 1982 to consider a complaint of a patient against a surgeon who had performed a stomach stapling procedure for obesity that was unsuccessful. No disciplinary action was recommended against the physician.

Professional Relations Committee for Ninth Councilor District
Charles A. Ledbetter, M.D., Chairman

The Ninth Councilor District Professional Relations Committee responded to one complaint in the period from April 1982. This complaint involved the quality of care rendered in an area emergency room. The Committee responded by a thorough investigation of the complaint. The complaint was not reconciled to the satisfaction of the complainant and litigation is being contemplated by the complainant.

Professional Relations Committee for Tenth Councilor District
S. E. Landrum, M.D., Chairman

During 1982, the Tenth Councilor District Professional Relations Committee acted upon nine complaints regarding nine different physicians. Some problems related to the attitude of individual physicians attending the patients in their office and others related to misunderstandings about fees. No cause for action against the physicians was found, and all complaints were apparently satisfactorily reconciled by our initial responses, as there were no repercussions.

Report of Councilors for the Fifth District
George W. Warren, M.D., Councilor
Cal R. Sanders, M.D., Councilor

The Fifth Councilor District had its annual meeting in El Dorado, Arkansas, at the Country Club on January 19, 1983. There were approximately 75 physicians and wives in attendance which we felt was a very good turnout for the district. Dr. John Alexander, President, presided and conducted the business of electing as President for 1983-84 Dr. Jerry Kendall from Camden; and as Secretary, Dr. Richard Pillsbury from El Dorado. The district approved the nomination of Dr. Cal Sanders of Camden to be presented to the

House of Delegates for election for a two-year term as Councilor from the Fifth Councilor District. Dr. Alexander then introduced Dr. Morriss Henry, President of the Arkansas Medical Society, who made a very interesting presentation concerning the current legislative session. He stressed to the doctors and the wives present the need for individual participation with their own representatives and senators. Dr. Henry did stress to the members present that many things potentially affecting medicine were coming before the Legislature this session.

The meeting was adjourned until January 1984.

Report of Councilors for the Eighth District
W. Ray Jouett, M.D., William N. Jones, M.D., Harold Purdy, M.D., Frank Morgan, M.D., Charles Logan, M.D., Councilors

Liaison with the Central Arkansas Health Systems Agency was maintained through our two representatives to the Agency.

Eighth District Councilors presented one program to members of the District on matters of interest to physicians in the district, and sponsored a program and film produced by the organization, Physicians for Social Responsibility, on the effects of a nuclear war.

Three new Councilors were nominated and elected to represent the Eighth District. These new Councilors were: Dr. Frank Morgan; Dr. Harold Purdy; and Dr. Charles Logan.

Adopted a resolution for the information of various Health Planning Agencies which requested that the application by Humana, Inc., for the construction of a new hospital in North Pulaski County be denied.

Supported the nursing scholarship program of the Auxiliary.

Contributed financially to the University of Arkansas Medical Center's program for lay persons on trauma education.

Contributed financially to Med Camps of Arkansas.

Endorsed the American Heart Association's Hypertension Screening Program.

Adopted a resolution favoring the amendment of a State Law which would allow a Little Rock City ordinance to be exempt from allowing emergency runs by ambulances as set forth in the Law.

Provided volunteer physicians for a program to benefit the Enterprises for the Blind.

Supported and adopted a resolution opposing Section 108 of the Tax Equity and Fiscal Responsibility Act of 1982.

Adopted a resolution to the Arkansas Supreme Court's Committee on Professional Conduct protesting television ads by a local attorney.

REPORT OF THE COUNCIL
John P. Burge, M.D., Chairman

The Council of the Arkansas Medical Society met on Sunday, July 11, 1982, at the Camelot Hotel in Little Rock and transacted the following business:

1. Chairman Burge announced the resignation of one of the councilors from the seventh district, Jerry Mann, M.D. Dr. Bracken nominated E. K. Clardy, M.D., of Hot Springs for the position and he was unanimously elected.
2. Chairman Burge reminded the Council that there had been no action by the House of Delegates to stagger the terms of office of the new councilors elected for the eighth councilor district at the 1982 Annual Session. Four councilors were elected at that meeting; two were not present at the meeting so Chairman Burge asked the councilors from the district to arrange a drawing for terms of office. (Charles Logan, M.D., drew the one-year term; William Jones, M.D., Frank Morgan, M.D., and Harold Purdy, M.D., will serve two-year terms.)
3. Mr. Mitchell reported on a meeting of the Association of Medical Society Legal Counsel. He reported on the order of the Federal Trade Commission prohibiting certain activities by the American Medical Association and its constitutent associations and on a number of other developments across the country involving the medical profession. The Council voted to write the Attorney General and the Insurance Commissioner for the State of Arkansas about the potential hazard of companies with inadequate financial backing coming to the State offering prepaid plans for various types of insurance.
4. The Council voted to authorize three additional luncheon meetings of the Medicine-Business Coalition. The three luncheon meetings with business leaders are planned for Texarkana, northeast Arkansas, and Fayetteville.
5. The Council authorized Medical Society

sponsorship of a social hour in conjunction with a planned conference in Little Rock this fall between medicine and business leaders.

6. The Council named Charles H. Rodgers, M.D., as vice chairman of the Medical Services Review Committee.
7. The Council reappointed the following to positions on the Arkansas State Arbitration Commission:
 First District: Milton Deneke, M.D., West Memphis
 Fourth District: Banks Blackwell, M.D., Pine Bluff
 Seventh District: Thomas M. Durham, Jr., M.D., Hot Springs
 Eighth District: H. Austin Grimes, M.D., Little Rock
8. The Council received information on a meeting held between officers of the Society and the Director of the Arkansas Department of Human Services regarding a demonstration project proposal by Beverly Enterprises for a prepaid, long-term care program under Medicare. The Council also heard a report on a meeting with Governor White on health care issues.
9. The Council approved a lease for approximately one-third of the second floor of the office building in Fort Smith for a period from July 1982 to October 1983 at $250 per month.
10. The Council voted to authorize the chairman to appoint a committee to study the establishment of a resident physician section at the State Society level.
11. Voted to request Woodbridge Morris, M.D., to accept appointment to the Long Term Care Facility Advisory Board in order to comply with the law which mandates that one member of the Board be a physician.
12. The Council voted to appoint a committee to study Journal advertising and bring recommendations to the Council for action.
13. The Council approved position papers on the following subjects:
 Chiropractic
 Rape
 Tobacco
 The position papers as approved follow these minutes.
14. The Council voted to respond to a request from the Arkansas Hospital Association Auxiliary with a statement that the Council is not in a position to commit the members of the Society who do take Medicare/Medicaid assignment to a published listing to that effect or to lend any financial support to such a project.
15. The Council voted to schedule a winter meeting in Little Rock on November 14.
16. Ray Jouett, M.D., speaking as president of the Pulaski County Medical Society, reported to the Council on the county society's referendum on affiliation with the Arkansas Medical Society. He reported that approximately 260 of the 680 polled voted to remain affiliated with the State Society and that the county society would, therefore, remain a part of the State Society.

The Council went into Executive Session for a report from legal counsel on the pension plan. Mike Mitchell, Society attorney, reported the termination of the old plan had been referred to the IRS for its approval. The PBGC has already issued its letter approving the old plan. All employees have elected a lump sum settlement of benefits under the old plan. Revision of the new plan is under way and it should be completed for adoption by the next Council meeting. Slight changes are being made in a few points.

The following Medical Society position papers were approved by the Council:

CHIROPRACTIC

General Information

Webster's New Collegiate Dictionary (1977) defines chiropractic as "a system of healing which holds that disease results from a lack of normal nerve function and which employs manipulation and specific adjustment of body structures (as the spinal column)." In *Dorland's Illustrated Medical Dictionary,* 25th edition (1974), chiropractic is defined as "A system of therapeutics based upon the claim that disease is caused by abnormal function of the nerve system. It attempts to restore normal function of the nerve system by manipulation and treatment of the structures of the human body, especially those of the spinal column."

Chiropractic, which literally means "done by hand", originates from the theories of Daniel David Palmer, a tradesman who operated a "magnetic healing" studio in Davenport, Iowa, late in

the 19th century. Palmer's writings indicate that one of his lifelong concerns had been to discover the ultimate cause of disease. According to Palmer, the solution was found in September of 1895. According to Palmer's writings, he was treating a janitor who claimed to be deaf and restored the man's hearing by adjusting one of the vertebra in his back. Apparently Palmer did not know that the nerves of hearing are entirely in the skull and that his theory that relieving pressure on the spinal nerve could affect hearing was totally erroneous. At that time diagnostic x-ray equipment was not available. Based on his erroneous concept, Palmer believed that misaligned vertebra of the back affect the nerves and was the cause of most diseases.

Chiropractors who belong to the International Chiropractors Association utilize spinal adjustment, manipulation of soft tissue, massage of muscles, or sustained pressure to ligaments. In general, chiropractors make extensive use of whole body x-rays for diagnostic purposes. The majority of chiropractors today use manipulation of the spine, and heat, light, water, electricity, vitamins, diet, nutritional supplements, colonic irrigation, and other devices.

An independent report on chiropractic was published by Consumers Union of the United States, Inc., entitled *Health Quackery, Consumers Union's Report on False Health Claims, Worthless Remedies, and Unproved Therapies.* Some of the recommendations made in this book on pages 199 and 200 are:

"Avoid any practitioner who makes claims about cures, either orally or in advertising. Anyone who implies or promises guaranteed results from treatment should be held suspect.

"Beware of chiropractors who ask you to sign a contract for services. A written agreement is not customary practice.

"Reject anyone advertising free X-rays. Radiation should not be used as a lure.

"Ask whether the chiropractor refers patients to other health professionals. If the answer is 'No'—or if the chiropractor disparges other professions or accepted treatment—walk out.

"Don't be pressured by scare tactics, such as threats of 'irreversible damage' if treatment isn't begun promptly. And watch out for those who encourage 'intensive treatment' because anything less would be a 'patch-up job'. The intensive treatment is more likely to apply to your bank account.

"Consumers Union would add one more precaution: See a physician as well and find out what he or she has to say about the problem."

(Reprinted by permission from *Health Quackery,* copyright 1980 by Consumers Union of United States, Inc., Mount Vernon, N. Y. 10550. Trade edition in hard cover and paperbound also published by Holt, Rinehart & Winston.)

The 90th U. S. Congress requested the U. S. Department of Health, Education and Welfare Secretary to perform a study of independent practitioners including chiropractors. The following are the conclusions and recommendation from that portion of the study pertaining to chiropractors.

Conclusions

1. There is a body of basic scientific knowledge related to health, disease, and health care. Chiropractic practitioners ignore or take exception to much of this knowledge despite the fact that they have not undertaken adequate scientific research.
2. There is no valid evidence that subluxation, if it exists, is a significant factor in disease processes. Therefore, the broad application to health care of a diagnostic procedure such as spinal analysis and a treatment procedure such as spinal adjustment is not justified.
3. The inadequacies of chiropractic education, coupled with a theory that de-emphasizes proven causative factors in disease processes, proven methods of treatment, and differential diagnosis, make it unlikely that a chiropractor can made (sic) an adequate diagnosis and know the appropriate treatment, and subsequently provide the indicated treatment or refer the patient. Lack of these capabilities in independent practitioners is undesirable because: appropriate treatment could be delayed or prevented entirely, appropriate treatment might be interrupted or stopped completely; the treatment offered could be contraindicated; all treatments have some risk involved with their administration, and inappropriate treatment exposes the patient to this risk unnecessarily.
4. Manipulation (including chiropractic manipulation) may be a valuable technique for relief

of pain due to loss of mobility of joints. Research in this area is inadequate; therefore, it is suggested that research that is based upon the scientific method be undertaken with respect to manipulation.

Recommendation

Chiropractic theory and practice are not based upon the body of basic knowledege related to health, disease, and health care that has been widely accepted by the scientific community. Moreover, irrespective of its theory, the scope and quality of chiropractic education do not prepare the practitioner to make an adequate diagnosis and provide appropriate treatment. Therefore, it is recommended that chiropractic service not be covered in the Medicare program.

(Note: Despite opposition from organized medicine and the U. S. Public Health Service, chiropractors won the right to render some services under both Medicare and Medicaid in 1973.)

Laws and Regulations

Chiropractors in Arkansas are licensed by a board which has the authority to develop regulations pertaining to chiropractic care. Chiropractors are not qualified by education or training to use prescription drugs or perform surgery and for these reasons are not so licensed.

Arkansas Medical Society Position

The Arkansas Medical Society knows of no scientific evidence to support spinal manipulation and adjustment as appropriate treatment for human ailments such as essential hypertension, heart disease, stroke, cancer, diabetes, and infections. Accordingly, the Society will warn the public of the hazards to health in entrusting the diagnosis and treatment of such conditions to practitioners who rely on the theory that disease is caused by misalignment of spinal vertebra and can be cured by manipulation and adjustment of the spine.

RAPE

General Information

The act of rape is one of the most psychologically devastating encounters a person can experience. It is a brutal act of violence which frequently robs its victims of self-identity and carries ramifications of guilt and fear which are felt long after the patient leaves the emergency room. The manner in which the medical treatment of the alleged rape victim is performed is of overwhelming significance to the psychological well-being of the patient.

Applicable Laws and Regulations

The definition of rape or sexual offense (Arkansas Criminal Code) is "a person commits rape if he engages in sexual intercourse or deviate sexual behavior with another person: (a) by forcible compulsion; or (b) who is incapable of consent because he is physically helpless; or (c) who is less than 11 years old." It is further a sexual offense in Arkansas for a person in engage in sexual intercourse or deviate sexual behavior with another person not his spouse who is less than 16 years old or who is incapable of consent because of mental deficiency.

Arkansas Medical Society Position

The Arkansas Medical Society sympathizes with the plight of rape victims and calls for compassionate interview and examination of them by physicians utilizing protocols developed locally by hospitals utilizing input from physicians, mental health professionals, and law enforcement officials. Hospitals should provide staff trained to assure compliance with the procedures and specific knowledge of the subject of rape. Establishment of a protocol will help to ensure that all patients will receive the same level of care. Standardized recording procedures and terms, especially for history taking, should be included in the protocol. Procedures for appropriate referral utilizing current referral lists for follow-up care to deal with any physical or emotional reaction should be established. The staff should be aware of the necessity for such follow-up care. The Arkansas Medical Society believes that all alleged rape victims should be approached gently and treated in an emotionally supportive manner by the medical profession. For the purposes of sympathetic medical care, it should be assumed that rape has actually occurred. To err on the side of sympathy is no failure; to err on the side of suspicion may help to ensure psychological injury to a human being.

TOBACCO

General Information

Smoking and the use of other forms of tobacco represent the most clearly preventable cause of death.

The Surgeon General, C. Everett Koop, said on February 22, 1982, that cigarette smoking causes thirty percent of all cancer deaths in the

United States, and even non-smokers should treat it as a public health potential hazard. Cigarette smoking is clearly identified as the chief preventable cause of death in our society. Smoking will be the major cause of an estimated 129,000 of the 430,000 cancer-deaths likely this year. Moreover, he estimated that it will cost 13 billion dollars in lost production and wages.

Cigarette smoking is a major cause of cancer of the lungs, larynx, and esophagus, and it is a contributory factor in bladder, kidney, and pancreatic cancer. Studies have shown this danger in all forms of smoking such as pipe and cigar, as well as the use of other forms of tobacco such as snuff and chewing tobacco. Numerous studies have shown the links between cigarette smoking and heart and vascular disease.

Edward M. Brandt, Assistant Secretary for Health, said the possibility that non-smokers may suffer ill-effects from smoke is real, if not proven, and non-smokers should "avoid being in smoke-filled rooms."

Government Regulations and Laws

Both the state and Federal Government, and in some cases local governments, tax cigarettes. The Federal Government requires that cigarette packages carry a warning label that they are dangerous to your health.

The U. S. Department of Agriculture subsidizes and, in some respects, regulates the growing of tobacco.

Arkansas law states that "smoking of tobacco, or products containing tobacco in any form in a doctors' or dentists' waiting room, in hospital corridors, nurses' stations in hospitals and clinics; and in all hospital rooms, except private patient rooms in this State; on school buses; is hereby prohibited." Conviction for this misdemeanor is punishable by fine.

Arkansas Medical Society Position

The Arkansas Medical Society urges its members to play a major role against the use of tobacco by personal example and by advice regarding the health hazards of its use.

The Arkansas Medical Society urges the education of the general public through nationwide educational programs as to the hazards of using tobacco emphasizing all facets of the high costs of this serious but preventable medical problem. Insurance companies should make public their current actuarial experience with smokers and non-smokers and offer reduced rates to non-smokers.

Both public and private schools should be advised regarding very early smoking habits of children, and schools should prohibit smoking by students and teachers in elementary and high schools. Comprehensive health education programs should be part of the curriculum through the twelfth grade. One such educational program for school children that has been very successful is the Berkley Project.

The Arkansas Medical Society is of the opinion that cigarette packages should contain the following statement, "Warning, smoking may cause, cancer, heart disease, and emphysema."

The Society opposes the government subsidy for the production of tobacco.

* * * *

The Executive Committee of the Arkansas Medical Society met on Wednesday, July 28, 1982, at the Little Rock Club in Little Rock and transacted the following business:

1. Requested and authorized Asa Crow, M.D., and C. C. Long, M.D., to attend the National Conference on the Utilization of Health Services in Chicago.
2. Requested that Charles Wilkins, M.D., represent the Society at the Conference on Strategies for Maximizing Hospital Nurse Resources in Atlanta, Georgia.
3. Considered a letter from Dr. Larry Pipes of Beverly Enterprises regarding the Medicare demonstration they are planning and voted that a letter be written to them raising questions concerning the project and expressing interest in continuing to be informed but to avoid any indication of approval or support of the project as it is now understood.

The Executive Committee met on Wednesday, August 25, 1982, at the Sam Peck Hotel in Little Rock and transacted the following business:

1. Bring before the Council a reminder of the rules pertaining to members' conduct during debate. If a speaker fails or refuses to conduct his discussion in an orderly or courteous manner, he may be denied the right of the floor.
2. After discussion of the Beverly Enterprises' proposal to provide health care in Central Arkansas, the Executive Committee recommended that a knowledgable individual be contacted to present a summary of the Beverly proposal to the Council at its next meeting.

3. Approved payment of a bill received for $775 from Rose Law Firm for work done in connection with the Medical Society pension trust.
4. Considered and voted that the amount that would be allocated for term life insurance for Ken LaMastus be applied to his regular life insurance since he is not physically qualified for term insurance. This amount would be $150 per year.

The Council met on Sunday, September 19, 1982, at the Camelot Hotel in Little Rock and transacted the following business:

1. The Council approved minutes of the Executive Committee meetings held July 28 and August 25.
2. Thomas Hejna of the State Health Department discussed a proposed plan for a pilot project for administration of Act 409 funds covering obstetrical care for indigent patients on a short-stay basis. The Council voted approval of plans for the pilot project.
3. Charles Wilkins, M.D., reported on a conference on nurse resources he attended as a representative of the Society. The Council directed the chairman to reactivate the committee for liaison with the nursing profession so that communication would be re-established with the nurses.
4. Purcell Smith, M.D., reported on the meeting of medicine and business representatives held in Little Rock September 17-18, 1982. He reported that a steering committee was being created to explore establishment of a medicine-business coalition and to draft proposed purposes for consideration of interested organizations. The Council went on record with an expression of continued interest in such a coalition.
5. As requested by the Executive Committee on August 25th, Mr. Bob Shoptaw of Blue Cross-Blue Shield presented a critique of the proposal by Beverly Enterprises for a demonstration project on delivery of health care to Medicare and Medicaid patients. The Council voted to begin an educational program on the Beverly Enterprises proposal and to request the assistance of the American Medical Association in the educational program. The Council directed that all members of the Society be advised regarding the proposal.
6. The Council approved the recommendation of the Position Papers Committee that Carl Raque, M.D., of Little Rock and Willis Stevens, M.D., of El Dorado be appointed to fill vacancies on the committee.
7. Paul Wallick, M.D., first vice president, reported for the ad hoc committee to review the Society committee structure. He reported that the committee recommended elimination of sub-committees on Traffic Safety, Immunization, Industrial Health, School Health and Physical Fitness, and Tuberculosis with responsibilities for those areas to revert to the standing Committee on Public Health. It was also recommended that the Advisory Committee to the Medical Assistants Society by eliminated and liaison with the Medical Assistants be the responsibility of the Public Relations Committee. Dr. Wallick reported that President Henry had increased the size of some committees to involve volunteers in activities of the Society. The Council approved the recommendations of the Committee and the increase in committee memberships.
8. The Council adopted proposed Society position papers on Drug Identification, Drug Substitution, and Second Opinion. The Council commended James M. Kolb, Jr., M.D., and his Committee on Position Papers for their work. Copies of the approved position papers follow these minutes.
9. The Council approved a recommendation by legal counsel that the draft of the proposed new defined contribution pension plan for Society employees by submitted to the Internal Revenue Service for review and comment.

The following Medical Society position papers were approved by the Council:

DRUG IDENTIFICATION

General Information

The ability to identify drugs is important to the public, health care professionals and law enforcement officers. There are times when people need medical treatment and it is extremely difficult, if not impossible, to identify the drugs they are taking or have in their possession. Many times people cannot remember the name of the drug they are taking or they may have transferred it to a container other than the one in which it was originally contained.

If law enforcement officers come in contact

with individuals who have medication in their possession, it is important that they be able to identify the medication to determine if the individual might be in need of medical care or if the medication is a narcotic which may or may not have been obtained legally.

Most major drug manufacturers make an effort to comply with drug identification methods such as shape, color, identifying symbols or numbers, and information concerning the identifiable characteristics is available. However, there are a large number of drug manufacturers who make no effort to make their products easily identifiable.

Laws and Regulations

There is a variety of laws pertaining to drugs and their identification. However, in some aspects, they are not adequate.

Arkansas' Act 218 of 1979 states that "any authorized person filling a prescription for dispensing to an ultimate patient shall affix to the container a label showing the trade name of the medicine or the generic name of the medication unless directed to the contrary by the physician."

Act 116 of 1981 is Arkansas' "look a like" drug act which makes it illegal to sell any substance to an individual when the substance is falsely represented as a controlled drug or narcotic. Other Arkansas pharmacy laws require that prescriptions be sold in a specific type of container that contains a label which identifies the prescription by number, date, the dispensing pharmacy, and the prescribing physician.

The United States Supreme Court ruled in 1982 that makers of generic drugs do not violate federal trademark laws by supplying to pharmacists generic drugs that look like and are substituted for certain brand name drugs.

Arkansas Medical Society Position

The Arkansas Medical Society believes that the ability to readily identify medication is a potentially life-saving matter. The pharmaceutical manufacturing company should make all drugs including individual tablets and capsules easily identified by some type of coding system. The system of identification should be a part of federal law and the code should be available to all hospitals and health care professions as well as others who have a need for this information.

The Arkansas Medical Society recommends that all persons presenting themself for medical treatment bring with them all medications they are currently taking in their original containers in order to avoid duplication of medication or possible drug interactions resulting from additional treatment.

The Arkansas Medical Society further recommends that all patients should be familiar with the name of the medication they are currently taking as well as the purpose for which it is prescribed. The Society is opposed to a mandatory requirement that the prescription label contain the purpose for which the medication was prescribed, because this would infringe upon the individual's rights to the confidentiality of his medical condition.

DRUG SUBSTITUTION

General Information

"Generic" drugs are those designated only by their chemical ingredients and not identified by a well-known brand name. The term "generic drug substitution" is the practice by pharmacists of substituting a drug in the same generic class and with the same chemical ingredients, strength, and quantity in dosage for the brand name drug prescribed by the physician. This substituted generic drug can be lower priced than a brand name product, for a variety of reasons.

Applicable Laws and Regulations

Arkansas Law Act 436 of 1975 provides for dispensing lower cost generically equivalent drugs provided that this substitution would not result in a higher cost to the patient. The law further provides that a prescribing physician may indicate on the prescription that substitution is not allowed. Substitution of such drugs is not allowed if the drug substituted appears on a non-equivalent drug product list prepared by the Arkansas State Board of Pharmacy.

Arkansas Medical Society Position

To minimize the chance of adverse reaction and variations of efficacy, the Arkansas Medical Society opposes the substitution of generic drugs by pharmacists without the consent of the prescribing physician.

The Arkansas Medical Society is concerned that the wide spread generic drug substitution without the permission of the attending physician would deprive the patient of his physician's best medical judgment. No single drug for any disease can be tolerated by everyone, much less be effective in all patients. It has been amply demonstrated that stability, bioavailability, taste, appearance

and patient acceptability often vary from one commercial preparation to another. A congressional report has stated that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process or controls, are adequate to ensure the ostensibly equivalent drug products are in fact equivalent in bioavailability (Office of Technological Assessment of the U. S. Congress, 1975).

Individual patients require individual decisions regarding therapy. Only a physician familiar with the patient's complete medical history and individual needs and sensitivities is in a position to prescribe therapeutic drugs to the patient. The Arkansas Medical Society believes that this responsibility cannot be freely transferred to pharmacists. The Arkansas Medical Society believes that to do so would increase the chance of adverse reaction or a lack of therapeutic benefit. In general, a lower level of care would result.

The position of the Arkansas Medical Society is that generic substitution in some instances is appropriate. However, any change in a prescription should be initiated by or done with the knowledge and concurrence of the physician.

SECOND OPINION

General Information

"Second Opinion" is a term which describes the process by which another physician's opinion is requested to confirm a diagnosis, need for surgical procedure, or specific therapy. The idea of such opinions is not new to the profession because this process has been used since the beginning of modern medicine; most physicians refer to this process as a consultation. Second opinions or consultations can be initiated either at the request of the patient or his attending physician, or a third party.

The increased emphasis on second opinions has been prompted by claims of unnecessary surgical procedures being performed. Programs calling for second opinion to verify the need for surgery are being promoted or in some cases required in some parts of the country by the federal government through the Medicaid Program and by some private insurance companies.

Arkansas Medical Society Position

The Arkansas Medical Society recognizes that the advisability of surgery and other specific treatment can be a matter of opinion and reaffirms the right of a patient or physician to seek a second opinion from another physician. The Arkansas Medical Society opposes the concept of mandatory second opinions or the imposition of a financial penalty by an insurance company or government agency for not obtaining a second opinion, but does believe that if a second opinion is required by an insurance company or government agency the second opinion should be at no direct cost to the patient.

In all cases involving consultation or second opinion suggested either by the patient or attending physician, the patient has a right to select the physicians. Physicians should recommend to the patient other physicians he feels are qualified by education and experience to perform a consultation or give a second opinion. Physicians have the responsibility to make available information from their medical records including history, laboratory data, and x-rays to the physician whom the patient approves or selects.

Under no circumstances should a consultant offer to provide continuing treatment or perform the surgical procedure in question unless explicitly requested to do so by the patient and with the knowledge of the original attending physician. The consulting physician has the responsibility of reporting his findings to both the patient and the original attending physician.

* * * *

The Executive Committee met on Wednesday, September 22, 1982, at the Sam Peck Hotel in Little Rock and transacted the following business:

1. Considered the action taken by Gary Eubanks and Associates, lawyers in Little Rock, having television and radio advertising pertaining to the solicitation of malpractice suits. The Executive Committee authorized an investigation of the matter and filing of a complaint with the grievance committee of the Bar Association.

The Council met on Sunday, November 14, 1982, at the Camelot Hotel in Little Rock and transacted the following business:

1. The Council approved minutes of the Executive Committee meeting held September 22.
2. Adopted a Memorial Resolution honoring L. A. Whittaker, M.D., who served for many years as a councilor and as president of the Society.
3. Heard a report from Larry Wright, M.D., chairman of the Ad Hoc Committee for Liaison with Social Services and the Health De-

partment. Dr. Wright recommended that the Council go on record as opposing the further extension of the Long Term Care Demonstration Project and any plans for making the concept of mandatory assessment an integral part of the Long Term Care system in Arkansas. He also suggested that the committee continue meeting with the State agencies to monitor Long Term Care. The Council adopted the recommendations presented. Dr. Wright and his committee were thanked and commended for their work.

4. The Council heard a report from Secretary Shuffield on a meeting October 27, 1982, with representatives of Beverly Enterprises. The Council voted to go on record as opposing that portion of the Beverly Enterprises' application which proposes that the firm be permitted to do its own peer review. The Council further voted to advise Carolyne Davis, of the Health Care Financing Administration, and the Arkansas Congressional delegation of the Council's action.
5. The Council voted to request input from interested groups, specifically Blue Cross-Blue Shield, who are willing to offer counter proposals, with input from the Medical Society, for an application for waiver for an alternative approach to Medicare competition.
6. Frank Morgan, M.D., chairman of the Nominating Committee, briefly discussed two sections of the Constitution and Bylaws which his committee felt should be reviewed. Under the new system of announcing the report of the Nominating Committee by February 1, the committee felt it would be unfair to prohibit proposed candidates from soliciting votes. The committee also felt that some exception should be made to the rule requiring attendance at the meeting at which the election is held. The Council voted to refer these items to the Constitutional Revisions Committee for drafting of proposed amendments.
7. W. Payton Kolb, M.D., advised the Council that the Section on Psychiatry proposed submission of his name as a nominee for a position on the Council on Constitution and Bylaws of the American Medical Association. He requested endorsement and financial support of the Medical Society. The Council voted approval.
8. The Council voted to instruct the Society's delegates to the American Medical Association to support proposals for legislation to repeal Section 108 of the Tax Equity and Fiscal Responsibility Act of 1982 and to support efforts to allow judicial review of policies and regulations pertaining to Medicare reimbursement.

The Council met in executive session to consider additional items of business as follows:

1. T. E. Townsend, M.D., Chairman of the Board of Trustees for the Pension Plan, reported to the Council.
 (A) The Council voted to approve the proposed plan for a "Money Purchase Pension Plan and Trust" (defined contribution plan) and to implement the plan prior to December 31, 1982.
 (B) Dr. Townsend advised the Council that three employees (Miss Richmond, Miss Thompson, and Mrs. Branham) have been penalized by the distribution of funds, according to advisor and attorney. The Board of Trustees recommended that they not be penalized. The Council voted to permit the Board of Trustees to negotiate these differences and report back to the Council for final approval.
2. Rhys Williams, M.D., Chairman of the Budget Committee, presented the proposed operating budget for the Society for 1983. The proposed budget was approved as presented. There was discussion of non-budgeted items, including (1) proposals before the American Medical Association to make the State Society president-elect a member of the AMA House of Delegates and to allow an additional AMA delegate to states with 75 percent of its members as AMA members and (2) financial support for Dr. Kolb's candidacy for an AMA Council position.

The Council met on Sunday, January 16, 1983, at the Camelot Hotel in Little Rock and transacted the following business:

1. Heard Mr. Dan Woods of Timex Corporation discuss a proposed Medicine-Business Coalition on health care cost containment. He reported that industry representatives will be designated to serve with Society representatives to explore the feasibility of establishing a coalition to work through interaction to deal with problems of health care costs.
2. The Council voted to request that the Chairman of the Council and the President of the

Society appoint a committee to study an impaired physician program and to report back to the Council.

3. Joe Verser, M.D., Secretary of the State Medical Board, advised the Council that legislation would be introduced in the current session of the Legislature to add one senior citizen to all boards of the State. The Council voted to oppose in principle any proposal to give representation to any class of people on State boards and commissions.
4. The Council accepted the nomination of the district councilors and appointed Kelsy Caplinger, M.D., of Little Rock to the eighth councilor district professional relations committee. The Chairman of the Council was authorized to designate the chairman of the district committee and the State committee for professional relations.
5. The Council appointed Amail Chudy, M.D., to the Board of Directors of the Medical Education Foundation for Arkansas to fill the unexpired term of Robert Watson, M.D. The Council adopted a resolution commending Dr. Watson for his MEFFA leadership and expressing the Society's appreciation.
6. Chairman Burge announced that the term of Rhys Williams, M.D., as a member of the Budget Committee had expired and F. E. Joyce, M.D., had been selected for appointment to the committee. Lloyd Langston, M.D., was nominated from the floor by Ray Jouett, M.D. Dr. Joyce was elected. Chairman Burge designated John Hestir, M.D., chairman of the Budget Committee for the ensuing year.
7. Accepted a report from an ad hoc committee headed by Lee Parker, M.D., to study establishment of a resident physician section at the State level.
8. The Council voted to contribute an additional $500 annually to the Auxiliary for two additional auxilians to attend national leadership training sessions.
9. James M. Kolb, M.D., chairman of the Position Paper Committee, recommended that the Society adopt the statement of the American Medical Association Judicial Council on execution by injection until such time as a position paper on the subject could be drafted. The statements approved by the AMA were:
 (1) An individual's opinion on capital punishment is the personal, moral decision of the individual.
 (2) A physician, as a member of a profession dedicated to preserving life when there is hope of doing so, should not be a participant in a legally authorized execution.
 (3) A physician may make a determination or certification of death as currently provided by law in any situation.

 The Council voted to adopt the AMA statements and request that a position paper be developed by the committee.

 The Council approved the position paper on "Freedom of Choice" as drafted by the committee. The position paper as approved follows these minutes.

The Council went into executive session for consideration of a report from the Board of Trustees of the Pension Plan.

1. Dr. Townsend presented method of closing out the old plan. Miss Richmond and Miss Thompson had been discriminated against in the plan settlement. The Board recommended that Miss Richmond and Miss Thompson be given full benefits. The Council approved the action and recommendation of the Board of Trustees of the Pension Plan.

The Council then reconvened in regular session and took the following actions:

1. Voted to make the Medical Auxiliary president and/or committee chairman ex-officio members of Society committees, as follows:
 (A) Society Public Relations Committee: Auxiliary President and Auxiliary Public Relations Chairman.
 (B) Society Committee on Legislation: Auxiliary Legislative Chairman.
 (C) Society Annual Session Committee: Auxiliary Convention Chairman.
2. Voted to authorize expenditures of approximately $1,200 for a reception to be hosted by Dr. Morriss Henry for the members of the State Senate.

The following Medical Society position paper was approved by the Council:

FREEDOM OF CHOICE

General Information

Freedom of choice as used in medicine refers to the right of an individual to select a physician of his choice. Likewise, except in cases of emergency, a physician has the right to select the individuals for whom he will provide services.

The practice of medicine is an art as well as a science. The provision of quality medical care is highly dependent upon an individual's confidence in his or her physician and the ability to develop meaningful communications between both parties. When a physician accepts a patient and provides care, he assumes an obligation to that patient. The physician-patient relationship usually does not function well when there are personality conflicts or lack of confidence. If a physician feels that he can no longer provide adequate treatment for a patient, he should state this to the patient and suggest that he see another physician. If this occurs during the course of a treatment, the physician should notify the patient in writing and allow the patient adequate time to seek the services of another physician.

Those individuals choosing a medical care plan such as a closed panel, group practice, health maintenance or other service organizations sometimes agree in advance to use only the services of physicians who are part of those organizations. When a particular hospital is selected for treatment the patient is limited to those services provided by physicians on that particular medical staff.

Applicable Laws and Regulations

The Medicare and Medicaid laws as well as the laws in most states allow an individual the right to choose his or her physician. There are, however, exceptions to this general statement. The Medicaid regulations and the Workers' Compensation laws in Arkansas allow for certain restrictions in freedom of choice in cases where individuals are abusing the program.

Arkansas Medical Society Position

The Arkansas Medical Society's position is that free choice of physicians is the right of every individual. One may select and change physicians, or may choose a medical care plan such as that provided by a closed panel, group practice, health maintenance or service organization. An individual's freedom to select a preferred system of health care, free competition among physicians, and alternative systems of care are prerequisites of ethical practice and optimal patient care.

In choosing to subscribe to a health maintenance or service organization and/or accepting certain treatment in a particular hospital, the patient thereby accepts limitations on choice of medical services.

In cases of accident or sudden illness, the need of an individual for emergency treatment may preclude free choice of a physician, particularly where there is a loss of consciousness. As an ethical matter, a physician is obligated to provide services on an emergency basis.

Although the concept of free choice assures that an individual can generally choose a physician, likewise a physician may decline to accept an individual as a patient. In selecting the physician of choice, the patient may sometimes be obligated to pay for medical services which may otherwise be paid by a third party.

Report of the Executive Vice President
C. C. Long, M.D.

As requested at the 1982 Annual Session, a more detailed report of staff activities will be provided than has been furnished in the past.

The staff is generally divided into two sections, one being the three executive members and the other being the six clerical personnel. The three executive members share responsibility for providing staff support to the various committees and the Council of the Arkansas Medical Society. This support involves the scheduling and attending of various committee and Council meetings and of furnishing the follow-up and implementation of actions that are recommended and approved. The staff also attends the annual and interim meetings of the American Medical Association to get clarification of information which would be of benefit. One or more staff members accompany the physician-members who attend the Leadership Conference in Chicago which is held each February. Also, two staff members make a trip to Washington, D. C., for a national legislative visitation on an annual basis.

One member of the staff is temporarily located in Little Rock during the biannual session of the Legislature to work with our legal counsel in lobbying and during the off-year when the Legislature is not in session, this member of the staff attends Legislative council meetings that pertain to health matters, particularly the Health Committee and the Joint Budget Committee hearings. These occur approximately twice monthly.

Also, members of the staff frequently attend meetings involving ancillary services such as the Long Range Planning Committee, the Arkansas Statewide Health Coordinating Council (SHCC), the Arkansas Department of Health, State Medi-

cal Board and other committees and councils that meet in the State that deal in matters that pertain to the field of health. In a normal year's time, one or more members of the executive staff attend approximately one hundred fifty such meetings.

In addition to these regular committee meetings and organizational meetings which we attend, from time to time the Council appoints special ad hoc committees which require staff time to do research, obtain information, and schedule and support these meetings. During the past year, five committees have been appointed, which have required time from the staff to render special services.

Another function of the central office staff has been to handle the "Doctor of the Day" program at our State Legislature which is obtaining physicians to serve each day the Legislature is in session. This requires scheduling, contacting and arranging this type of work.

Also, there are three specialty groups whose office and support work is handled by the central office staff. This involves scheduling meetings, sending out notices, collecting dues, doing their bookwork, and that type of thing.

During this year, the office staff has been occupied a considerable portion of their time on new projects. This has been primarily under the direction of the Associate Executive Vice President and involves designing membership files from the membership on the Data Word Processor, the new automated equipment which we put in during this past year, and redesigning and working with the billing system so that this could also be done more efficiently on the automated system. We are also working to change our Journal production from letterpress to offset production type printing and make for a better, more efficient system in producing our monthly Journals.

AMS-PAC is also handled through our office, the secretary being the Associate Executive Vice President. A considerable amount of time is involved in dealing with these matters, as well as the Medical Education Foundation for Arkansas (MEFFA), and this bookwork and recordkeeping is handled through our office.

Placement Service is handled through the Society office, the Assistant Executive Vice President doing a great deal of this work. One hundred fourteen physicians from out of State made contact with this office seeking practice opportunities in the State. Booklets were mailed to over five hundred interns, residents and physicians describing the cities and towns in Arkansas where opportunities for practice are available. It is difficult to know how many physicians we attracted into the State with this program but, over time, it has averaged from eight to fifteen per year who have settled in Arkansas as a direct result of contacts, leads, and information that has been furnished by the central office staff.

Planning the Annual Session of the Arkansas Medical Society involves the entire staff, including the executives and clerical. A great deal of time is spent in planning and arranging for the activities, scheduling events, assigning space to exhibitors, answering their questions, and making decisions pertaining to the utilization of space for the various functions, and other activities. At the time of the meeting, the staff usually spends three or four days in furnishing support to the meeting and providing for registration and other activities.

The clerical staff, consisting of six people in the office, is involved in getting out mailings, doing typing, and other types of activity. The Society mails between 70,000 and 90,000 pieces of mail each year to members and other individuals who request information in an off legislative year and 20,000 to 30,000 more when the Legislature is in session.

The central office has several phone lines which are kept fairly busy. We receive calls requesting information and advice from physician-members throughout the State, as well as from other people who are interested in health matters and request information. Also, a number of calls are answered each year and discussed concerning complaints, and questions are received, particularly from patients who do not understand certain portions of their bills or instructions or results of tests or treatment. Many of these questions that can be answered are and those that cannot be answered satisfactorily are referred to our various professional review committees.

All new licentiates in the State are sent a letter advising them of the Arkansas Medical Society. When they become new members, further communication is addressed to them giving them all the services that are provided by the Society to its members, including insurance benefits, the information which we retain on all members concern-

ing all the facts about their background in terms of date of birth, school attended, degree, specialty and this type information. This information is frequently requested by physicians for themselves and is transmitted to certain organizations and groups where they wish to have verification of their training background and practice. This is followed up whenever necessary.

The office staff is also involved in working on the monthly Journal of the Arkansas Medical Society. All advertising and listings are developed by the staff. The Journal is assembled before going to the printer and then is returned and proofread before the final printing is made.

This covers the major functions of the central office staff. However, there are many, many functions which are not described in this report but we receive all types of requests and these are answered as promptly as possible and information is given whenever it is available.

Budget Committee
Rhys A. Williams, M.D., Chairman

The Budget Committee submitted the following budget for 1983. The complete budget, as presented to the Council, is available to members upon request.

INCOME

Budget Item	*1983 Budget*
Membership Dues	$414,963.00
Journal Advertising	37,000.00
Booth Income	10,000.00
Annual Session	4,000.00
AMA Reimbursement	4,500.00
Miscellaneous & Rosters	8,000.00
Interest	75,000.00
Specialty Desk	1,200.00
INTRAV Reimbursement	2,400.00
Ark. Foundation for Medical Care	14,076.00
Continuing Medical Education	600.00
	$571,739.00

EXPENSES

Salaries	$196,910.00
Travel & Convention	55,000.00
President's Travel	2,500.00
Taxes	14,000.00
Retirement	21,600.00
Stationery & Printing	8,500.00
Office Supplies & Expense	20,000.00
Telephone & Telegraph	12,000.00
Rent	18,600.00
Postage	22,000.00
Insurance & Bonds	17,000.00
Auditing	3,000.00
Council Expense	6,500.00
Lobbying Activities	2,500.00
Journal Printing	57,000.00
Annual Session	24,000.00
Winter Meeting	—0—
Dues & Subscriptions	5,000.00
Gifts & Contributions	1,500.00
Woman's Auxiliary	1,700.00
Legal Services	25,000.00
Special Committee	1,000.00
Rural Health	500.00
Miscellaneous	6,000.00
Freight & Express	100.00
Office Equipment	10,000.00
Continuing Medical Education	500.00
	$532,410.00

Medical Education Foundation for Arkansas
W. Martin Eisele, M.D., Secretary

Since its founding in 1962, the Arkansas Medical Education Foundation has been under the capable and visionary leadership of its first and only president, Dr. Robert Watson.

By prudent investment of the annual contribution of five dollars a year by each member of the Society, he has built a financial base which permits annual significant contributions to medical education in this State, primarily through the University of Arkansas School of Medicine. The Foundation continues to sponsor eight lectureships a year at the Medical School by educators and physicians of national reputation. These programs are presented as "The Arkansas Medical Society Lectures".

In addition, this year the Foundation awarded a grant of ten thousand dollars to the History of Medicine Library at the Medical School.

A few weeks ago, for reasons of health, Dr. Watson resigned from the Foundation. His stewardship and guidance of this Foundation for these many years are very much appreciated by his fellow members on the Foundation Board, and, I am sure, by all the members of the Medical Society.

Arkansas State Medical Board
January 1, 1982 - January 1, 1983

The officers and members of the State Medical Board are as follows:

H. Elvin Shuffield, M.D., Chairman

Hugh R. Edwards, M.D.
Frank M. Burton, M.D.
John F. Guenthner, M.D.
George F. Wynne, M.D.
Bascom P. Raney, M.D.
Vernon H. Carter, M.D.
W. Ray Jouett, M.D.
Joe Verser, M.D., Secretary-Treasurer
Mr. John B. Currie, Sr.
Robert M. Cearley, Jr., Attorney

The State Medical Board published a 1983 annual directory which has gone to the printer and we should be able to mail copies to each physician at a very early date.

The State Medical Board asked the Arkansas Medical Society to appoint a committee to study the feasibility of setting up an Impaired Physicians' Program similar to the Georgia Disabled Doctors' Program. A number of states have already set up programs similar to the Georgia program.

The Board, at a regular meeting, voted that the Diversion Investigative Unit no longer represent the Arkansas State Medical Board. Each physician was notified that this agency no longer represents the Board.

The Board, during the year, asked the Board's attorney, Robert M. Cearley, to take legal action against a lay midwife who had set up a clinic in South Arkansas.

Action is still pending in the case of the Arkansas Nurses Association vs. the Arkansas State Medical Board and the Arkansas Medical Society relative to the regulation of physicians hiring nurse practitioners.

The Medical Board voted to ask the Legislature to approve an increase in the reciprocity and FLEX exam fee from $125 to $225. This increased fee was necessary because of an increase in the charges made by the Federation for the FLEX test material. The surrounding states have all increased their reciprocity and exam fees to this amount or more.

A yearly financial report of the Board's activities, prepared by Johnston, Freeman & Company, has been sent to the office of the Arkansas Medical Society, a summary of which is included in this report.

The Board investigated every case of violation of the Medical Practices Act and every complaint filed against physicians reported to the secretary during the year.

The State Medical Board licensed 157 physicians by examination and 96 physicians by reciprocity during the year 1982.

Following is a summary of the Board's proceedings:

Physicians registered for 1982:	
Resident	3,070
Non-Resident	2,091
Physicians licensed by examination	157
Physicians licensed by reciprocity	96
Physicians licensed by National Board	58
Physicians certified to other states	160
Licenses revoked for non-payment of annual registration fees	33
Licenses suspended for non-payment of annual registration fees	190
Licenses suspended for violation of Medical Practices Act	5
Cases pending for violation of Medical Practices Act	1

ARKANSAS STATE MEDICAL BOARD
BALANCE SHEET
June 30, 1982 and 1981

Cash in banks —	*June 30, 1982*	*June 30, 1981*
Bank of Harrisburg, AR		
Checking Account	$ 48,602.89	$ 50,550.55
Certificates of Deposit	148,411.83	121,841.52
Accrued interest receivable	5,205.83	4,667.72
Office equipment	6,227.51	6,227.51
Less: Accumulated Depreciation	(3,078.80)	(2,456.03)
TOTAL ASSETS	$205,369.26	$180,831.27
LIABILITIES AND FUND BALANCE		
Accounts payable	$ 3,887.37	$ 1,775.41
Payroll taxes withheld	824.82	1,479.13
Accrued retirement	—	376.77
TOTAL LIABILITIES	4,712.19	3,631.31
FUND BALANCE	200,657.07	177,199.96
TOTAL LIABILITIES & FUND BALANCE	$205,369.26	$180,831.27

Arkansas Department of Health
Ben N. Saltzman, M.D., Director

The Arkansas Department of Health has experienced a very busy year. The Director, too, has been busy. In addition to becoming better acquainted with the staff of some 1500 people, with 96 county public health units, with 11 area offices, with 75 County Health Officers, with an equal

number of County Judges and with most of the State Senators and Representatives, he has served as Secretary to a revitalized and enlarged, superb Board of Health, attended meetings over the State on matters related to public health, organized continuing education courses for Arkansas physicians, appeared before legislative committees, served in the Governor's cabinet, attended meetings of the Arkansas Medical Society, attempted to "put out fires" and has endeavored to further his own education in Public Health.

This has been a labor of love. The men and women in the Department who serve the people of our State are outstanding examples of what good public servants should be. I am very proud of them and as I move about the State, I find that our citizens are also proud of them. The report that follows is a compilation of their efforts. While admittedly long, it does not begin to document all the things they have accomplished in the past year. To do so would require a book. For purposes of comparison, I have followed the format of last year's report. It is worth reading. Our taxes are being well spent in the Arkansas Department of Health.

BUREAU OF PUBLIC HEALTH PROGRAMS

Charles McGrew, M.P.H., Director

1982 Public Hearings on Block Grants

The Arkansas Department of Health, in cooperation with the Governor's Office and the Arkansas Department of Human Services, participated in a series of five public hearings to gain input into the planning process for two ADH block grants—the Maternal and Child Health Services Block Grant and the Preventive Health and Health Services Block Grant. These hearings were held in Little Rock (August 4), Pine Bluff (August 6), Jonesboro (August 9), Hope (August 11) and Fayetteville (August 13).

Preceding each hearing's formal comment period, the Health Department presented a public education slide-and-sound show depicting the nature of the Health Department's block grants and describing the services funded by them. Attendance at all but the Little Rock hearing was sparse. Several hundred letters of support, however, were received for the record from ADH clients, local government officials and health professionals across the state.

Division of Health Statistics

During 1982, a newly-reorganized Division of Health Statistics accomplished the following:

1. Completion of the first phase of a comprehensive evaluation and redesign of the vital statistics system.
2. Initial training of a staff member in occupation and industry coding.
3. Development of an occupational mortality system to analyze causes of premature death in adult males.
4. Initial development of a planning data system for Health Department management teams. This uses socioeconomic and demographic data from the 1980 Census as well as vital statistics.
5. Development of computer graphics capability using the UAMS computer and the subsequent distribution of socioeconomic and demographic data in graphic form.
6. Establishment of a graduate student internship program with the UALR Department of Health Administration.
7. Performance of the policy analysis for the Maternal and Child Health section of the Arkansas State Health Plan.
8. Provision of on-going technical assistance to the Arkansas Department of Human Services in the areas of Long Term Care and Medicaid policy analysis.
9. Preliminary development of a program evaluation design for the Family Planning program.

Office of Rural Health Development

The Rural Health Office assists communities that are designated by the U. S. Public Health Service as having a shortage of physicians in starting primary care clinics and in retaining primary care services. In the calendar year 1982, the Rural Health Staff accomplished the following:

1. Assisted in recruiting 20 physicians into shortage areas.
2. Assisted in developing four new primary care clinics in College Station (Pulaski County), Hector (Pope County), Lakeview (Phillips County), and Wilson (Mississippi County). None of these communities had a clinic for at least 15 years.
3. Intervened on behalf of the State and helped retain Federal funding for two primary care clinics (Cotton Plant and Clarendon).
4. Developed the first comprehensive report on the eight Federally-supported primary care clinics in Arkansas.

5. Surveyed sixty rural hospitals to determine physician needs.
6. Negotiated a contract with the National Health Service Corps (NHSC) to assume NHSC responsibilities in Arkansas.
7. Negotiated a Cooperative Agreement with the Regional Office of the Public Health Service.

Rape Crisis

When Congress created the preventive Health and Health Services Block Grant in 1981, they included some funds earmarked exclusively for rape crisis activities. Because the Health Department had no rape crisis program in existence, the decision was made to work with the Governor's Task Force on Rape to decide how the funds would best be allocated.

During 1982, these block grant funds covered a wide variety of activities by a number of agencies:

1. The training of law enforcement personnel in the conducting of rape investigations and in the appropriate methods of relating to rape victims.
2. Providing at no cost to hospitals the supplies needed for medical/legal examinations of rape victims.
3. Support of the delivery of services to rape victims in Pulaski County (which accounts for 47% of the number of rape victims in the State).
4. Providing seed money for community-based projects statewide. These funds encouraged public awareness activities and the development of networks of services to rape victims in Russellville, Jonesboro, Monticello, Fayetteville, Batesville, and Fort Smith.

SECTION OF PERSONAL HEALTH SERVICES

Hearing and Speech Clinic

Early identification of hearing problems is known to be very important. Through a special project, we are now able to assist in determining if newborns are hearing impaired. The Health Department has combined efforts with the Arkansas Council on Hearing Loss to identify newborns who are at a higher risk for hearing loss than normal. This is done by using birth information and family history, such as a history of hearing loss in the family or a baby who had elevated bilirubin levels. These infants are then screened using brain stem evoked response to acoustic stimuli. A micro-processor computer provides a printout of the results. All testing is done while the baby is asleep.

Arkansas is the only location where this particular screening program is being done outside a hospital. It is performed in our Children's Hearing and Speech Clinic. At present, we are testing only babies from one hospital and will soon expand to two others. From June 1982 (when the program started) to December 1982, there were 108 infants screened by the program.

Personnel, in addition to department audiologists, are local volunteer audiologists and lay volunteers. Funding for the equipment and supplies is provided by the Central Arkansas Telephone Pioneers, by the Optimist Clubs of Arkansas and from private donations.

Family Planning Program

The Family Planning Program held a Women's Health Care Update September 2-3, 1982, with 116 health professionals in attendance. The seminar included presentations on the following topics: pre-conceptional counseling; encouragement of responsible contraceptive use in adolescents; parental involvement in services to adolescents; identification of high risk groups; menstrual physiology; menopause; nutrition and contraceptive use; cervical and breast cancer diagnosis and treatment; newly available contraceptive methods and methods under research. The UAMS College of Nursing awarded 11.4 contact hours to participants through its continuing education program.

Early and Periodic Screening, Diagnosis and Treatment (EPSDT)

The EPSDT program underwent numerous changes in 1982. The EPSDT outreach component shifted from Arkansas Department of Health to Social Services on February 1, 1982. Arkansas Department of Health continued to provide medical screening services in county units, but experienced a drastic reduction in the number of children referred as well as screened. This reduction was due in part to the increase in the number of private screening providers and to the development by Social Services Division and Medicaid of "assumed" and "equivalent" screens.

Monthly meetings between Social Services' Field Operation Staff and Arkansas Department of Health staff opened new lines of communication. Discussion of county issues and joint problem-solving benefited program coordination

and improved understanding of each agency's role in EPSDT at the county level.

SECTION OF ENVIRONMENTAL AND HEALTH MAINTENANCE

Emergency Medical Services

The Rules and Regulations Pertaining to EMS were amended in accordance with ACT 293 of 1981. Major changes included the right of an EMT to be employed within a medical facility and to work in the emergency room or as part of a crash team. The amendments also made changes in ambulance requirements which would aid providers in upgrading their ambulance service and emergency vehicles while cutting costs.

Twenty-five persons, representing various state agencies, comprised an EMS First Responder Course taught by the Office of EMS staff. Classes were held once a week for three months at the Health Department and Department of Education. A total of 17 people successfully completed the course and were registered as EMS First Responders.

During the same time that the above course was being conducted, EMS staff taught and certified members of the Governor's Security Force in cardiopulmonary resuscitation (CPR). Training was conducted at the Governor's Mansion over a three week period. This training resulted in ten officers being certified at the Basic Rescuer level according to American Heart Association's standard.

During the first week in October, EMS hosted the annual meeting of the National Association of State EMS Training Coordinators. This week-long working seminar resulted in numerous changes in the training of Emergency Medical Technicians. Thirty-five states and the District of Columbia were formally represented at the seminar; over 130 persons took an active role.

Childhood Immunization Program

During 1982 the state of Arkansas was measles-free and one step closer to "Making Measles a Memory."

The computer-based Arkansas Immunization Reporting System assessed over 200,000 immunization records, and those individuals found to be delinquent in one or more immunizations were contacted by local health unit personnel.

The hospital-based Maternal Education Program gained momentum in 1982. There are currently 63 hospitals participating in this program which involved visiting new mothers while they are still in the hospital, explaining the importance of immunization to the health of their new babies and providing the mother with an immunization information packet. In 1982, over 13,000 bedside visits were conducted by volunteers from the Arkansas Hospital Association Auxiliary.

The Arkansas Department of Health took a major step toward the ultimate eradication of rubella. Rubella vaccine is now available in Health Department clinics to all individuals regardless of age or sex. The school immunization regulation was also revised in 1982, with the rubella exemption for females 12 years of age and older no longer being available.

Home Health Program

Home Health Care Services is now one of the major thrusts of the Agency. Home care offers the physician's patient the choice to recover at home, in the patient's familiar surroundings. Home Health is a cooperative effort between the physician who initiates action, the patient, the patient's family and the Public Health Nurse acting under doctor's orders.

During FY '82, the Department made the following major accomplishments in Home Health/Personal Care.

1. Expanded Home Health Services by 250% during FY '82. (Expanded by 450% when the timeframe January, 1981 to January, 1983 is examined.) During FY '82, personnel who are dedicated solely to Home Health Services within the Department increased from 76 to 209, while the Department's total personnel remained relatively constant.
2. Started Personal Care Services in ten counties in Northern Arkansas. Since the service was begun, our caseload has grown from 21 active patients to a caseload at the close of FY '82 of 301 patients.
3. Coordinated a Public Information Campaign to inform the Health Care Community of the new availability of Home Health Services through the Health Department.

Venereal Disease Program

Despite the loss of four positions through a reduction-in-force in 1982 and an increase in reported cases of syphilis and gonorrhea, the Arkansas Venereal Disease program managed to apply epidemiologic follow-up to 99 percent of

the reported cases of early syphilis and 53 percent of the reported cases of gonorrhea.

Eleven patients with penicillin-resistant gonorrhea were reported in Arkansas in 1982. Rapid follow-up of these individuals and their contacts brought the outbreak under control before a large reservoir of cases was allowed to develop. The last reported case of penicillin-resistant gonorrhea occurred in August, 1982.

Improved reporting of gonococcal pelvic inflammatory disease (G/PID) was achieved in 1982. National studies have shown that the percentage of female gonorrhea morbidity identified and treated as G/PID should range from 10-17 percent. In Arkansas, this percentage increased from less than five percent in 1981 to over eight percent by the end of 1982.

Training of staff was a major emphasis in 1982. All three first-line supervisors attended a supervisory workshop presented by the Centers for Disease Control (CDC). The clinic supervisor at Pulaski County Venereal Disease Clinic also attended a CDC course for clinic managers. Sexually Transmitted Disease Patient Compliance Workshops were held for investigators, communicable disease nurses, and nurses working in specialized venereal disease clinics. Finally, three nurses attended a CDC training course for STD clinicians.

Hypertension Control Program

During 1982, the Hypertension Program compiled a new hypertension policy and procedure manual. The new manual includes the usual policy statements, but also contains extensive educational and behavioral modification interventions. These, as well as recommended clinic, tracking, screening and blood pressure measurement procedures contain specific information to aid the public health nurse in effectively teaching hypertension patients to control their blood pressures. Although prepared for the local health units, the educational portions of the manual will be available to any source desiring hypertension patient interventions to aid in their blood pressure activities.

Development of a micro-computer system gave the Hypertension Program an efficient method for storing the hypertension data collected by the local health units. In conjunction with this system, new streamlined records were provided, designed to reduce the public health nurse's paperwork, while maintaining sufficient data for patient and program management by the Central Office.

A greater emphasis on coordination of existing blood pressure activities resulted in the formation of a High Blood Pressure Task Force co-sponsored by the Health Department and the American Heart Association. The group consists of both lay and professional groups and individuals either already involved in hypertension or expressing an interest in blood pressure activities. The Department Director is the Honorary Chairman.

Tuberculosis Program

During 1982, the micro-computer was brought into full function for keeping and analyzing data on patients with tuberculosis in Arkansas. All reports to CDC were compiled by the use of this instrument. Several reports on progress of our treatment program were written from this important data base. In addition, a very important observation was made and a paper written on it and submitted to the Journal of Infectious Diseases (by Drs. W. W. Stead and J. P. Lofgren). There appears to be an increase in actual susceptibility of elderly persons to tuberculosis. We observed that the proportion of really elderly TB cases exceeded by a factor of three the increase in the proportion of the general population in this oldest age group. This has considerable implication for where the TB Program should spend its time and limited resources in order to be the most effective in lowering the still-too-high TB rate in Arkansas.

A symposium for Arkansas physicians was held in April, and a post-graduate course of national scope on "What's New in Tuberculosis," with special emphasis on short-course chemotherapy was held in December in conjunction with the Office of Continuing Education for physicians of the UAMSC.

Approximately 50 physicians worked part-time with the Tuberculosis program conducting chest clinics and conferences throughout the State. Seventeen hospitals contracted for and treated hospitalized tuberculosis patients. An average of 52 chest clinics in 40 counties and 22 chest conferences in nine contract hospitals were held monthly. The average monthly chest x-ray clinics held by the mobile x-ray technicians was 19. The technicians x-ray patients in county health departments; sometimes they go into nursing homes to x-ray both patients and employees. During

1982, 364 patients and employees in 14 nursing homes were x-rayed for TB.

The chart below is for comparison of hospitalized tuberculosis patients during the last three fiscal years.

Comparisons — TB Program	*Hospital Admissions, State-Paid*
July-June, 1979-1980	289
July-June, 1980-1981	226
July-June, 1981-1982	209

Epizootic Disease Office

The Epizootic Disease office continued to provide protective and consultative assistance to Arkansans who were exposed to animal diseases transmissable to man. Requests for information and assistance came from physicians, veterinarians, health workers and individual citizens.

Rabies

The yearly total of rabid animals in Arkansas was 157 including 126 skunks, 19 bats, 4 cattle, 4 dogs, 2 cats, and 2 foxes. Rabid bats reached an all-time high. They are a constant source of exposure to humans since they often fly into a person or drop to the ground and are captured by children who are subsequently bitten.

Raccoon rabies has increased dramatically in the eastern states and there is the possibility of its further spread west to Arkansas which has an estimated raccoon population of 500,000. Raccoon rabies increased in the State of Virginia from 7 cases in 1980 to 432 cases in 1982. The increase in raccoon rabies is being closely monitored so that necessary protective measures can be taken to protect human health if necessary.

In 1982, 173 persons were administered post-exposure rabies treatment because of being bitten by a rabid or suspect rabid animal. The Health Department procedure of purchasing and storing large quantities of the new Human Diploid Cell Vaccine (HDCV) for distribution to physicians throughout the State as needed has proven to be an efficient and economical system. Vaccine is distributed to physicians from the central office when indicated after consultation with the Public Health Veterinarian. Costs are billed to the patient, but no one is denied vaccine because they cannot afford it. In most instances, the vaccine can be delivered within 12 hours anywhere in the State.

The new HDCV has proven to be 10 times more antigenic than the Duck Embryo Vaccine; 99.9% of the recipients in the United States have developed protective titers. The Center for Disease Control no longer requires serological testing for protective antibody titers upon completion of treatment series.

Tularemia

During 1982, 73 cases of human Tularemia were reported in Arkansas — an all-time high, exceeding the previous year's record of 60 cases. The U. S. total for 1982 was 254. Arkansas, therefore, accounted for 29% of all reported cases. Hopefully in 1983 more can be learned about wild and domestic animal reservoirs and about the tick species that harbors and transmits the disease.

A five-year analysis of Tularemia in Arkansas will be published in 1983, analyzing case histories from 1978 through 1982.

Rocky Mountain Spotty Fever (RMSF)

RMSF declined from 35 cases and four deaths in 1981 to 21 cases and one death in 1982. The Health Department Laboratory began using the Indirect Fluorescent Antibody (IFA) diagnostic test which detects protective antibodies earlier in the course of the disease and which is the most reliable of all the various laboratory tests for RMSF. The Physician's Bulletin emphasized the necessity for the early diagnosis and treatment of RMSF and the Arkansas Medical Journal published a Health Department sponsored article titled "A Five Year Update on RMSF" which further publicized the presence and seriousness of RMSF in Arkansas.

Epidemiology Program

During the year, numerous disease investigations were conducted throughout the State. These included a major milk-borne outbreak of *Yersinia enterocolitica* in Pulaski County, a Salmonella outbreak in a restaurant in Jefferson County, a reported increase in cancer mortality in Sebastian County, tuberculosis in a nursing home in Saline County, histoplasmosis in Desha County, several outbreaks of hepatitis which involved day care centers and required special clinics to administer immune globulin to contacts.

Provided at no charge approximately 1500 doses of immune globulin to household contacts of infectious hepatitis cases.

Coordinated a statewide surveillance and provided culture media and laboratory service for collection and testing of influenza specimens during the influenza season.

Continued to follow semi-annually the 35 typhoid carriers located in the State.

BUREAU OF ENVIRONMENTAL HEALTH SERVICES

Jerry Hill, RS – Director

Engineering Section

In the estimation of the engineering staff, the tornado/flood disaster in December, 1982 caused the most devastation to our public utilities across the State since the beginning of our Division in 1919. The actual monetary estimate is several million dollars. However, the staff's prompt reaction to the disaster averted any major disease outbreaks. To ensure the safety of the drinking water, forty boil-water orders, affecting 53,920 Arkansans, were issued to water systems that had disaster-related problems. An untold number of technical assistance conversations with water operators were made on problems encountered with their public water systems. Due to the large number of boiling orders in Health Department's Area 10, a bacteriological laboratory was set up and staffed at the Batesville water treatment plant. As repairs were being made, the engineering staff made on-site visits to provide technical assistance and collect bacteriological samples for boiling order recision. Due to the staff's effort, we are not aware of any disease outbreaks caused by contaminated water from our public water systems.

Currently, our engineers are working with their Federal counterparts in preparing disaster damage estimates on public utility damage in the 23 counties that have been declared eligible by President Reagan. Our engineers will estimate the actual costs to repair the damages to our public water and sewerage systems. These estimates range from the cost to repair a minor water leak to replacing an entire treatment facility. Once the estimates are approved by the Federal Emergency Management Agency, our cities will receive federal monies for the repairs and at a later date, our staff will make the final construction inspections to ensure proper use of the federal money.

Plumbing and Natural Gas Section

The major accomplishment of the Plumbing and Natural Gas Section for 1982 was a statewide inspection program which covered every public school in the State of Arkansas.

The purpose of this program was to ensure there would be no catastrophic situations in Arkansas such as were aired on the news media concerning water heater explosions in other states.

Every school was checked to ensure that the water heating equipment was in safe working order. Inspections involved gas installations and the use of the proper BTU rated temperature and pressure relief valve.

Through the concentrated efforts of the inspectors, many dangerous conditions were noted. Most of these violations have been corrected.

Superintendents of all schools were advised not to use any heating equipment until all corrections were made.

Food and Drug Contract Section

This section, operating with two inspectors and a half-time secretary, reflected the following activities:

1. Food warehouse inspections 282
2. Bakery inspections 120
3. Bottling plant inspections 33
4. Warning letters issued 74
5. Legal actions 3
6. Food samples collected 312
7 Voluntary destruction of food 8,393 lbs.

Grade "A" Milk Program

This program has revised the Rules and Regulations Pertaining to Grade "A" Milk to conform with modern manufacturing practices and to coincide with federal requirements.

An Advisory Board for Grade "A" Milk was formulated and met four times during the year. This Board is comprised of four representatives from industry and three from the Division of Sanitation Services.

More than 12,000 inspections were conducted including producers, plants, receiving stations, milk haulers and ice cream plants.

Food and Dairy Products Section

The Rules and Regulations pertaining to Food Stores, Markets and Warehouses were totally rewritten to conform with the U. S. Public Health Service Model Ordinance.

Fourteen area meetings were attended to improve and standardize statewide Sanitarian activities.

Nine hundred and fifty food establishment plans were reviewed and approved. A program of microfilming was implemented for plan review referral.

An entirely new system for inventory and issuance of permits was implemented through a

word processor which saved the State several thousand dollars.

Another Food Survey Evaluation Officer was certified by the U. S. Public Health Service and two area-wide surveys were completed.

Inspectional activities in the area of manufactured milk were maintained. Nine hundred and twenty producer milk samples were sent to the laboratory for analysis. Seven hundred and fifty farm inspections were conducted along with eighteen plant inspections. Nine equipment tests were performed at plants.

A half-million pounds of meat was inspected for certification of sale to State institutions requiring some 525 man hours.

The section issued approximately 6,500 food service permits. Forty-five food salvager permits and twenty licenses to produce manufactured milk were also issued by the section.

General Sanitation Section

The Rules and Regulations pertaining to Swimming Pools were completely revised and adopted by the State Board of Health. This section initiated the necessary forms licenses and assumed the responsibility for regulating tatoo parlors throughout the State.

This section in conjunction with the University of Arkansas, conducted a 72-hour domestic waste water course for fourteen Sanitarians selected from throughout the State.

In response to field requests for educational training for swimming pool operators, twenty-three schools were conducted throughout the State and over two hundred people were in attendance. Two county pool surveys were conducted at the request of Sanitarians to determine compliance with applicable laws and rules and regulations.

More than one hundred visits were made throughout the State to assist Sanitarians with special problems and decisions.

The most important and time consuming accomplishment concerned the formulating and implementation of statewide minimum standards for field Sanitarians. For the first time in the history of the Division, there is a statewide written program requiring Sanitarians to meet their responsibilities toward the more than fifty-five sets of rules and regulations or laws that have been assigned to this office for implementation and enforcement.

1. *Radiation Control Programs – Environmental*

 A. The State's "Radiological Emergency Response Plan for Nuclear Power Generating Facilities" was approved by the Federal Emergency Management Agency during 1982.

 A 15-hour training course on health physics as it pertains to our support of this plan was developed and conducted by Division staff members. This course was taken by all of the department's health physicists and certain personnel from Sanitarian Services and the Area III Office.

 The Technical Operations Control Center (TOCC) for ANO emergency response was upgraded dramatically during the early part of the year and a full-scale, multi-agency exercise was conducted in May. This center is located within the Arkansas National Guard Armory at Russellville.

 B. The State of Arkansas is going to have to decide during the 1983 session of the Legislature what we are going to do about low-level radioactive waste generated within our boundaries. This Division has worked all during 1982 with the Governor's Office, the Department of Pollution Control and Ecology, and the Department of Energy on drafting legislation to cover this problem. The results are a draft bill which would involve Arkansas in a regional compact for handling low-level radioactive waste and a draft bill to enable the State to manage its own low-level radioactive waste – to be presented if the Legislature chooses not to involve Arkansas in a compact with other states.

2. *Radiation Control Programs – General*

 A. Because of the many advances in technology and increased usage of ionizing radiation in industry and the healing arts, a bill updating the State's Radiation Control Act was drafted for presentation at the 1983 session of the Legislature. The State Board of Health's RULES AND REGULATIONS FOR CONTROL OF SOURCES OF IONIZING RADIATION were also revised and a new edition was published.

 B. Arkansas is a Nuclear Radiation Control (NRC) Agreement State and is subject to yearly review by that agency. The 1982

evaluation stated that NRC believes our program for regulation of agreement materials to be adequate to protect the public health and safety and is compatible with the Commission's program for the regulation of similar materials. This, considering the source, is high praise indeed.

C. Radiation Control Program personnel were able to take advantage of several excellent training courses during 1982. Included are courses offered by the federal government such as: (1) "Basic Health Physics and Radiation Protection" NRC and Oak Ridge National Laboratories; (2) "Licensing Practices and Procedures" NRC; (3) "Medical Use of Radionuclitides" NCR; (4) "Radiation Therapy – Medical Linear Accelerators" FDA's Bureau of Radiological Health; (5) "Inspection Procedures" NRC; (6) "Radiation Emergency Protection" FEMA's Emergency Management Institute; (7) "Cobalt Therapy Calibration" NRC; (8) "Medical X-ray Protection" FDA; (9) "Industrial Radiography" NCR. As a result, although we have an extremely small staff, our technical people are well trained and able to handle their responsibilities.

3. *Emergency Management Programs – Emergency Communications Center*

The Emergency Communications Center (ECC) was upgraded and enlarged during 1982. The ECC now handles radio traffic for the EMS system, State Health Department radio network, and is tied into the Office of Emergency Services network. The center was enlarged by 100% to allow for all necessary emergency personnel to be in the center as needed during emergency situations.

4. *Emergency Management Programs – Hazardous Materials*

During 1982, the Hazardous Materials program was involved in three major projects as well as our routine emergency response functions. These were:

A. Formaldehyde Analysis and Evaluation – Statewide:
Following a nationally televised program on the "health hazards of formaldehyde in the home," the Agency was swamped by requests for analysis of formaldehyde concentrations. To date, we have completed over 420 screening analyses and conducted more than 100 follow-up investigations where problems were indicated during screening.

B. Polychlorinated Biphenyls – Fort Smith:
A source of polychlorinated biphenyl (PCB) contamination was discovered in a residential section of Fort Smith. The Hazardous Materials Program, in concert with the Agency's Epidemiological Programs, advised on health effects as required during the clean-up efforts by the Department of Pollution Control and Ecology.

C. Vertac – Jacksonville
New information became available during 1982 indicating that some off-site burial of dioxin-containing material may have occurred at Jacksonville. The Hazardous Materials Program has been engaged in evaluating the accuracy of this information and recommending an appropriate plan of action. At this time, this investigation is still in progress.

Health Facility Services

Despite critical budget cuts, regular operations have continued. In addition to the three hundred nineteen (319) health care facilities for which the Division is responsible, fifty-two new health care facilities were surveyed and certified for participation in the Medicare Program. New categories of health care providers are Ambulatory Surgical Centers, Comprehensive Outpatient Rehabilitation Facilities and portable X-Ray Units.

A major accomplishment has been the development of regulations, and subsequent consultations, which allow hospitals to establish family centered maternity-newborn centers. This allows couples to experience natural childbirth in a home-like setting with a family support system but with the sophisticated knowledge, staff and equipment of a hospital readily available if emergency situations occur. Hopefully, this will reduce the alarming number of home deliveries which is beginning to occur in Arkansas with the potential for a significant rise in the infant/maternal mortality rate.

A reorganization within the Division was accomplished which will provide for one team to survey all hospitals. The team will consist of a Registered Nurse, Registered Pharmacist, Reg-

istered Records Administrator, Registered Microbiologist and a Registered Dietitian. All hospital departments will be surveyed, where under the incomplete two-team system, only partial surveys could be accomplished.

The division has worked extensively with hospitals which no longer meet the fire-life safety code to close these facilities and replace them with safe modern structures.

A good relationship between the health care providers and the Division continues to be evident even in these days of "anti-regulatory" trends. This is a major accomplishment in itself.

PUBLIC HEALTH LABORATORIES

Chemistry Branch

The inorganics laboratory began routinely performing nitrate analysis on non-community water supplies.

Microbiology Branch

The routine prenatal screening of MCH Patients for Rubella Titer by the Passive Hemoagglutination test was discontinued effective July 1, 1982.

The Clinical bacteriology laboratory received a heavy workload of samples resulting from a Yersinia enterocolitica outbreak in Little Rock and Memphis. The organism was isolated in one milk sample and in many users.

BUREAU OF COMMUNITY HEALTH

Nancy Ropp, Director

The Bureau of Community Health Services (BCHS) is responsible for the administrative direction and supervision of all field services, personnel, and resources through eleven Area offices and ninety-five Local Health Units. BCHS achieved several very important goals in 1982 that had both immediate and long-term impact.

In September 1982, the very first meeting for all Local Health Unit Administrators was held at the State Health Department. Although there has always been someone assigned and functioning as "Administrator" for each county, Act 778 of 1981 represented the first official recognition of their responsibilities by granting them a one step salary increase. The September meeting was the first attempt to bring all of the Administrators together to specifically discuss and learn more about their roles and responsibilities. BCHS plans to continue these in-service training meetings for the Administrators at least on an annual basis. A continuing goal of BCHS is to provide the training necessary to enable the Local Health Unit Administrators to function as well in management and administration as they do in their professional duties of nurse, sanitarian, or clerk.

Another first has been the design and implementation of a standardized system for fiscal accountability in all Local Health Units. This enormous project was the result of cooperative efforts between BCHS and the Bureau of Administrative Support Services. All Local Health Units have now implemented the system. Among the positive results of implementing the fiscal accountability system are: (1) much improved accuracy in identifying the sources of funds collected (i.e., fees for family planning services, fees for septic tank inspections, etc.), (2) greatly improved bookkeeping, reporting, and general accounting of funds, (3) providing field personnel with initial and on-going technical assistance in fiscal management, and (4) much more responsible handling of funds and disbursement in the Local Health Units. A considerable effort was required by the Central Office and field personnel to implement this system. The primary responsibility for fiscal accountability in the Local Health Units rests with the Administrators.

A continuing priority of BCHS is to constantly improve general management in the field. To assure that the public receives comparable, high quality services statewide, the Agency has developed minimum standards for Local Health Unit functions such as the storing of drugs and supplies, file management and retention, orientation of new employees, etc. Some of these functions already had some standards but those were neither uniform nor audited for compliance. Therefore, BCHS has developed a performance audit tool to measure Local Health Unit performance in complying with Agency standards and policies. It is felt that this internal audit mechanism, due for implementation in early FY '84, will have lasting positive effects on field administrative management and assist greatly in developing new standards and updating old ones.

BCHS is also striving for better documentation of services provided by the Local Health Units. All Local Health Units have made efforts to keep track of the services they provide. However, BCHS, in cooperation with the Division of Records and Clerical Services and others, has developed a prototype for a statewide, uniform ac-

tivity reporting system. BCHS plans to implement this system in the spring of this year.

The Arkansas Department of Health has significantly increased its effort in developing an active role for County Health Officers. To date, these efforts have been successful. Every county now has a Health Officer. For the very first time, orientation meetings for the County Health Officers were held in the State Health Department in May and October of 1982. These orientation meetings will continue, as needed, for any new appointments.

Last fall, the Boone County Health Unit in Harrison moved from its old facilities in the hospital to the new, renovated facilities in the old federal building. These new facilities will serve the residents of Boone County in a more adequate fashion.

Many different services and programs are offered through Local Health Units, such as immunization, family planning, hypertension, maternity, food service inspections, environmental protection, etc. Details regarding these services and programs appear elsewhere in this report.

BUREAU OF HEALTH RESOURCES

A. Stuart Fitzhugh, M.D., Director

Office of Dentists, Pharmacists, Physicians and Veterinarians

The Office of Dentists, Pharmacists, Physicians and Veterinarians continues to act in its advisory and evaluation role by conducting interdisciplinary reviews of family planning, home health and water quality issues. In addition, the Office surveyed immunization policies with specific emphasis on the hepatitis B virus and a new vaccine, and surveyed the drug recall policy following the adulterated Tylenol incidents. The review, update and approval of professional standards and operating procedures for quality assurance of programs and services continues as an ongoing function of the Office.

Medical Social Services

The Division of Medical Social Services expanded its counseling services to a greater number of maternity, family planning and well child clinics. The staff also increased its role in counseling for Health Department staff through conducting small group sessions in several local health units where interpersonal relationships were creating problems.

All of the social work staff were licensed in 1982 to comply with the new licensing bill. Two of the staff were asked to present a paper at the National Association of Perinatal Social Workers Conference in Houston.

A pilot project was initiated utilizing two full time social workers in Home Health to help patients deal with disabling illnesses. The Division carried out a joint survey with the Division of Health Education of the outreach and education being provided to family planning patients by CAP agencies throughout the State.

Pharmacy Services

The Division of Pharmacy Services has successfully completed a Statewide Quality Control program to improve accountability of drugs used by the various programs of the department. The Division was instrumental in the notification and recall procedures during the Tylenol incident; assisted in the quarantine and destruction procedures of 5 pharmacies' stocks of drugs during the recent tornado and flood disasters; assisted the Food and Drug Administration in quarantines and recall of various drugs and devices; assisted the Hospital Licensure Division in conducting surveys of over 60 hospitals and related facilities; developed Drug Monographs to be used by the Home Health program; and assisted and provided consultation to the following agencies in matters pertaining to Pharmacy, Drugs, Cosmetics and Medical Devices:

The Attorney General's office; Governor's office; Department of Social Services; State Crime Lab; Pharmacy Board; Medical Board; Veterinary Board; Office of Alcohol and Drug Abuse Prevention; U of A College of Social Studies; U.A.M.C.; Prosecuting Attorneys Association; F.D.A.; Legislative Council; Mental Health Services; Department of Corrections; Board of Optometry; State Board of Nursing; Office of Purchasing (DFA); Board of Therapy Technology.

Policies and Procedures

During 1982, the position of Policies and Procedures Coordinator was created and filled to function as a part of the Bureau of Health Resources. This position is responsible for coordinating the revision of the Health Department Policies and Procedures Manual. The Coordinator also provides technical assistance to persons using and updating the Manual. This office's goal is to produce and maintain an up-to-date,

practical, helpful Manual that all Health Department employees can use. The revision of the Manual and the proper coordination of changes in policies and procedures are continuing priorities of the Health Department to help maintain and improve the efficiency and effectiveness of our health services.

Public Health Education

In 1982, the Division of Public Health Education has been active in conducting weekly educational sessions for the patients involved in the Adolescent Parent Clinic at the Pulaski County Health Unit. Two smoking cessation clinics have been held and conducted by the Risk Reduction section of the division in the past year.

The Division of Public Health Education, in cooperation with the office of Emergency Medical Services and the Telecommunications Section, coordinated the State Fair project for the Department of Health in October 1982. Sixteen programs/divisions from the Department of Health and an exhibit from the Arkansas Academy of Family Physicians were featured in this project. During the course of the state fair, a total of 3,134 individuals viewed the exhibition.

The Division worked very closely with the Pharmacy Division in releasing information to the media regarding the Tylenol scare and in responding to public inquiries.

Through a contract with the State Health Planning and Development Agency, the Division of Public Health Education carried out a pilot adolescent research pilot to determine adolescent attitudes, knowledges, and practices toward birth control, sexual intercourse, pregnancy, and self-esteem. Management Area 8's family planning clinics were the sites used for piloting the adolescent survey.

Public Health Nursing

The Division of Public Health Nursing is responsible for high quality service to Health Department patients through staff nursing and nursing management. During 1982, approximately 74 public health nurses were added to the Health Department. The growth was mainly through increased Home Health services. During 1982, four key nursing management positions were filled: In-service Director, Home Health Chief Nursing Consultant, Health Maintenance Chief Nursing Consultant and MCH Chief Nursing Consultant.

Monthly staff meetings were held with Nursing Supervisors and Central office program staff to better meet program goals in the 96 local health departments. A three-day staff inservice on physical assessment was presented to every nurse on staff.

Records and Clerical Services

The Division of Records and Clerical Services provides professional leadership and direction to the eleven Area Records Consultants. The Consultants provide orientation, supervision and direction to approximately 250 field Administrative Support staff. Monthly staff meetings (including in-service education) were held for the eleven Consultants. Area clerical conferences were conducted by the area Consultants. The Division staff attended several of these conferences. One statewide clerical in-service workshop was held.

The Division developed and initiated criteria for determining clerical staffing in local health units. Criteria for promoting and reclassifying clerical employees also was established and initiated.

Division personnel assisted various Bureaus, Programs and Divisions with implementation of new policies and procedures relating to records, forms and clerical procedures. The Family Planning and Home Health programs were emphasized during 1982.

Nutrition Services

The Division of Nutrition Services emphasized education to combat nutrition misinformation. As part of this emphasis, a videotape on this subject has been purchased for loan to professional health and nutrition related groups for their meetings. A nutrition newsletter has been published four times for all health department units and other interested persons. In-service education for nutritionists has reflected the concern about food faddism. Newspaper food editors have been guests at presentations to encourage education of the public sector.

The Infant Feeding Guide, First Twelve Months, has been updated and is being printed.

Current information on maternal nutrition as a component of perinatal health care was presented in a workshop for hospital and health department nurses. Guidelines for maternal nutrition were written to be included in the Health Department Manual and a poster session concern-

ing maternal nutrition was provided at the Arkansas Dietetic Association in November.

Because of the large increase in home health patients, public health nutritionists have been active this year in providing consultation and in-service education to nurses concerning nutritional care of homebound patients with chronic diseases.

Environmental Training and Professional Development

1. Coordinated 6-weeks training for eight (8) new sanitarians; developed experimental training program for three (3) new sanitarians; developed In-service Training Manual for sanitarians.
2. Conducted presentations or planned presentation with county sanitarians:
 a. 26 food schools
 b. 2 food workshops
 c. 2 audio-visual workshops
 d. 3 Career Days
 e. 1 Rabies
 f. 1 Environmental
3. Coordinated workshops:
 a. Time Management – May 1982
 b. Bobbie Browne's trip to Russia – January 1982
 c. Positive Attitude – December 1982
 d. Communication workshop – January 1983
4. Exhibits:
 a. State Fair
 b. Sanitation Convention
5. Developed or provided assistance on slide program for:
 a. County Health Officers Meeting
 b. Home Health Program
 c. Rural Health Conference
 d. Arkansas Waterworks Convention
 e. Environmental Health Month
6. Published quarterly newsletter
7. Developed Bureau Booklet on Divisions in Bureau of Environmental Health Services.
8. Discussion leader "Basic Supervision and Basic Management" study course for Sanitarian Supervisors; guest speakers: Ken Coon, Dr. Carl Stapleton, and Becky Williams.
9. Committees:
 a. Employees Newsletter
 b. Quality Assurance
 c. Employees Lifestyle
 d. History Committee
 e. Employees Newsletter
10. Supervised Health Education Intern (8 weeks).
11. Coordinated internship for Environmental Health Intern (15 weeks).
12. Coordinated Environmental Health Month:
 a. Governor's Proclamation
 b. Radio, television, and newspaper interviews
 c. County projects
 d. Tree planting ceremony; quest speaker, Ray Thornton
 e. Environmental Presentations
 f. Environmental Art Fair
 g. Environmental Exhibits
 h. Co-sponsored speaker with UALR
13. Surveyed employees of Bureau of Environmental Health Services and Sanitarians regarding training needs.
14. Coordinated Agency Red Cross Blood Drive – December 1982.
15. Coordinated After Action Report for Bureau with regard to flood/tornado disasters in December 1982.

BUREAU OF ADMINISTRATIVE SUPPORT SERVICES

Tom Butler, Director

The Personnel Division has updated the Personnel Policy and Procedures Manual which has greatly improved the consistency of management governing personnel matters. Plans have been made to start the development of two major personnel projects: a new Affirmative Action Plan and a new Performance Evaluation System.

Data Processing Division

The Arkansas Department of Health has made significant progress in strengthening available Information Processing resources. An overall agency Information System Plan (I.S.P.) has been adopted which provides a written definition of information management actions for a five year period as well as their relative priorities. In support of this I.S.P., several actions have occurred:

1. A Data Processing Steering Committee, consisting of the five Bureau Directors, was formed to provide effective operational direction.
2. A new Director of ADH Computer Services was added in June, 1982.
3. A new Data Processing Supervisor was added to establish a stable Scheduling and Quality

Assurance function within the Data Processing Division.

4. An Invitation for Bid was released for new hardware and software capable of supporting the projected five year workload of ADH. The new computer system should be operational by August, 1983.

Division of Vital Records

On June 24, 1982, the Rules and Regulations pertaining to Vital Records were amended to allow immediate cremation of dead bodies and update on preservation of dead bodies. (Bodies may not be held over 72 hours without embalming unless body temperature can be maintained at 60 degrees or below).

The Health Department has found it necessary over the past year to stretch the public health dollar even farther. The department's budget has been stressed not only by increased costs for service delivery due to inflation but also by federal cutbacks and a shortfall in State revenue. Absorbing the impact of these reductions has been difficult but has been accomplished up to this point without significantly affecting the availability of services. However, any deeper cuts into the public health budget will leave no alternative for the department but to curtail services and eliminate programs.

Arkansas Medical Society Political Action Committee J. Larry Lawson, M.D., Chairman

In the spring of 1982, the following individuals were elected to the Board of Directors of the Political Action Committee:

Dr. J. Larry Lawson, Paragould
Dr. Charles H. Rodgers, Little Rock
Dr. W. Payton Kolb, Little Rock
Dr. F. E. Joyce, Texarkana
Dr. George Warren, Smackover
Dr. James M. Kolb, Jr., Russellville
Dr. Milton Deneke, West Memphis
Dr. John Hestir, DeWitt
Dr. Bobby McKee, Jonesboro
Dr. A. Samuel Koenig, Jr., Fort Smith
Mrs. Paul Cornell, Little Rock
Mrs. Charles Wilkins, Russellville
Mrs. John P. Burge, Lake Village
Mrs. Lynn Harris, Hope

The Board elected Dr. Lawson as chairman and Dr. Rodgers as secretary-treasurer.

At the annual meeting, the Board discussed campaigns for the 1982 elections. The Board voted not to participate in candidate support for the primary elections. It was agreed by the Board that input from the general membership should be solicited regarding candidate support.

Subsequently, members of the Medical Society received a questionnaire regarding support by PAC in the gubernatorial and congressional races. Responses were received from 4% of the membership. There was a clear majority of support among the Board and survey respondents for the Republican candidates in the gubernatorial race and races in the second and third congressional districts. The board voted to support those candidates. The Board also voted to support physician candidates for the State Legislature. The Board decided to conduct another poll of members in the first and fourth congressional districts regarding those races. The Board subsequently voted to support the Democratic candidate in the fourth congressional district race and to take no action on the first district race.

The total membership for the Political Action Committee for 1982 was 154 physicians, spouses and staff.

The chairman attended the Winter Board meeting of the Arkansas Medical Society Auxiliary, along with the president and president-elect of the Arkansas Medical Society. The importance of participation in political action and the legislative process was discussed with the Auxiliary members.

Plans are being made for the chairman of the PAC Board to accompany the Arkansas Medical Society delegation on the annual congressional visitation scheduled for April 1983.

More participation in the Political Action Committee is necessary. The PAC Board strongly urges you to join PAC. Sustaining membership is $99, family membership $65 and regular membership $40. Contributions may be forwarded to AMS-PAC, Post Office Box 1208, Fort Smith, Arkansas 72902.

AMA-PAC is a separate segregated fund established by the American Medical Association. AMS-PAC is a separate segregated fund established by the Arkansas Medical Society. Contributions received from corporations will be used solely for political purposes and not deposited in the separate segregated funds. Contributions are not limited to this suggested amount. Neither

AMA nor AMS will favor or disadvantage anyone based upon the amounts of or failure to make PAC contributions. Voluntary political contributions will be used in connection with State and Federal elections and are subject to the prohibitions and limitations of the Federal Election Campaign Act (Federal regulations require this notice).

Report of Delegate to AMA
Joe Verser, M.D., Senior Delegate

The AMA House of Delegates met in Chicago in June. The policies adopted at the meeting included several items of interest to the practicing physician.

The House approved development of a national health policy over a two-year period. A variety of professional, business, labor, and insurance organizations will participate in development of the policy. The purpose is to establish the private sector's national agenda for dealing with health issues.

The House adopted reports and resolutions calling for continued strong support for Federal legislation specifying that there is no Federal Trade Commission jurisdiction over the professions.

The House approved a Board of Trustees proposal to increase regular dues of $30 in 1983. Other dues categories were increased proportionately. In recommending the dues increase, the House noted the economic condition of the country but feels that the work of the association is important and can continue successfully only from a firm financial position.

The House approved a proposal calling for a revival of the general internship as the transitional year between medical school and residency.

The House voted to continue to urge the President and Congress to maintain the eligibility of medical students to participate in the guaranteed student loan program. It was also voted to urge the President and the Congress to fund direct student loan programs available to medical students in amounts which are equal to or greater than those of fiscal year 1982 for all such programs.

The House approved a policy on corporation or employer-sponsored examinations. The policy states that:

1. The AMA encourages employers who provide or arrange for special or comprehensive medical examinations of employees to be responsible for assuring that these examinations are done by physicians competent to perform the type of examination required.
2. Whenever practical, the employee should be referred to his or her personal physician for such professional services.
3. In many instances in which an employee does not have a personal physician, efforts should be made to assist him or her in obtaining one, with emphasis on continuity of care.
4. This effort should be aided by the local medical society whenever possible.

The House voted to continue to support equity in pension plans, including appropriate increases in the maximum contribution to self-employed retirement plans (Keogh), and actively oppose enactment of H. R. 6410, the Pension Equity Tax Act of 1982, in its form as introduced because of its major discriminatory provisions.

The House adopted a resolution directing investigation into the frequency of and seeking a solution to the problem of erroneous payments to insurance beneficiaries instead of physicians to whom they have assigned such payments.

The House took several actions pertaining to tobacco and health. It reiterated its opposition to all smoking; reaffirmed its support for the concept of rotational warnings on cigarette packages; supported the concept of a Federal office on smoking and health; and supported the concept of self-extinguishing cigarettes.

The House of Delegates met again in December in Miami. Three hundred five delegates were seated. It was reported that the House membership will increase in 1983 when 25 states will have additional delegate representation as a result of including direct-pay members in the delegate allocation. The House rejected recommendations to provide delegate seats for State Society presidents and to provide proportional representation to specialty societies. The House adopted a recommendation for establishment of a hospital-medical staff section with a delegate in the House.

The House adopted new criteria for AMA dues-exemption to provide waiver of dues for members age 65 and retired. Members age 70 will have dues exemption regardless of retirement.

The House considered four resolutions pertaining to a proposed revision in the Medical Staff chapter of the JCAH "Accreditation Manual for Hospitals." After much discussion, the House voted to:

1. Commend the AMA Commissioners to the JCAH for their efforts to develop methods of preserving appropriate physician involvement in the maintenance of quality patient care throughout the process of revising the "Accreditation Manual for Hospitals."
2. Disseminate the proposed revisions for comment and inform physicians of subsequent revisions through appropriate publications.

The House also voted to reaffirm existing policy on the issue which states:

RESOLVED, That it is the policy of the American Medical Association that the objective of hospital accreditation is primarily to evaluate the quality of patient care, to provide recommendations for remedying deficiencies and improving the quality of patient care, and to withhold accreditation from those institutions which do not meet an acceptable standard of patient care; and be it further

RESOLVED, That the AMA oppose accreditation requirements which impose rigid, uniform, mandatory administrative procedures, methods of operation, nomenclature, or forms of organization for the hospital, its governing board, attending staff and committees; and be it further

RESOLVED, That the AMA recognize that excellence in patient care is more easily attainable when the accreditation process is flexible and is concerned with evaluating the quality of hospital service and not the administrative procedures, or form of organizations used to provide patient care; and be it further

RESOLVED, That the Board of Trustees, in its discretion give the AMA Commissioners to the Joint Commission on Accreditation of Hospitals appropriate guidance for implementing this resolution.

The House voted to reaffirm its position that containers of all alcoholic beverages be required to bear the following statement on the labels:

> "Alcohol may be injurious to your health and, if consumed during pregnancy, to the health of unborn children."

The House also voted to encourage the media to refuse to accept advertising of alcohol beverages.

The House adopted the following policy pertaining to nurse practitioners:

> 'That the American Medical Association, in the public interest, urge state medical associations to oppose enactment of legislation to authorize the totally independent practice of medicine by any individual who has not completed the state's requirements for licensure to engage in the practice of medicine and surgery in all of its branches."

The House opposed regulations under the Tax Equity and Fiscal Responsibility Act of 1982 which would interfere with and/or redefine the practice of medicine and change reimbursement mechanism for physicians' services. The House directed that such opposition shall be expressed through action in Congress, with the Administration, and in the Courts.

The House voted to continue to encourage the use of infant and child automobile restraint systems through voluntary education programs and through legislation.

The House adopted the policy of supporting the continued use of Pertussis immunization but, recognizing that there may be adverse effects with the current antigen, encouraging the development of improved vaccines.

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SCIENTIFIC ARTICLES

The Significance of Measuring Body Fat in Medical Practice 417
James R. McNair, M.D., and Barry S. Brown, Ph.D.

Treatment Protocol for Acute Thrombophlebitis During Pregnancy 420
Carl E. Northcutt, M.D.

Another Use of the Laser: A New Treatment for Open-Angle Glaucoma 422
Morriss M. Henry, M.D.

FEATURES

ECG of the Month 423
Ray H. Hall, M.D., and John W. Watson, M.D.

Office Orthopaedics: "Metatarsalgia" 424
H. Austin Grimes, M.D.

Editorial: "Blue Thoughts" 426
Alfred Kahn, Jr., M.D.

From Other Years: "Editorial . . . The Resignation of Dr. Hooper" 427

Medicine in the News 428

Minutes of the Council 434

Keeping Up 436

Personal and News Items 438

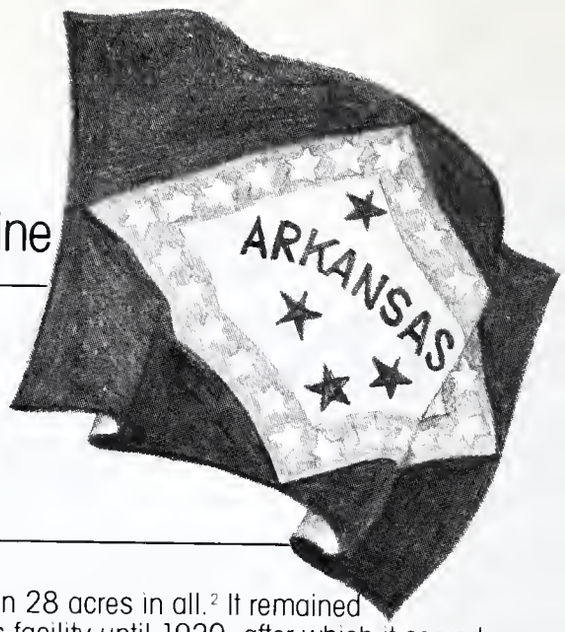
New Members 439

Things to Come 441

Obituaries 442

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Roche salutes the history of Arkansas medicine



THE 80-BED BEGINNING

Fram the terrible experience af the Civil War came a new understanding of the nation's need for medical facilities. Wartime surgeons, Unian and Canfederate alike, shared their battlefield experiences, publicized their hard-wan knowledge, lectured and taught yaung dactors and, in same cases, became founders af medical colleges.[1]

Born at the dinner table

An important result af their callaborations and recammendations was the appropriatian by the United States Congress in 1882 of funding for the first joint services haspital—the Army and Navy General Haspital at Hat Springs, Arkansas. The original propasal for this histaric institutian was made over dinner at the Old Palace Bath Hause in Hot Springs.[2]

On January 17, 1887, only one year after the city's incorporation, this pianeer facility apened ta receive patients. The 80-bed haspital consisted af five separate buildings cannected by verandas.[3]

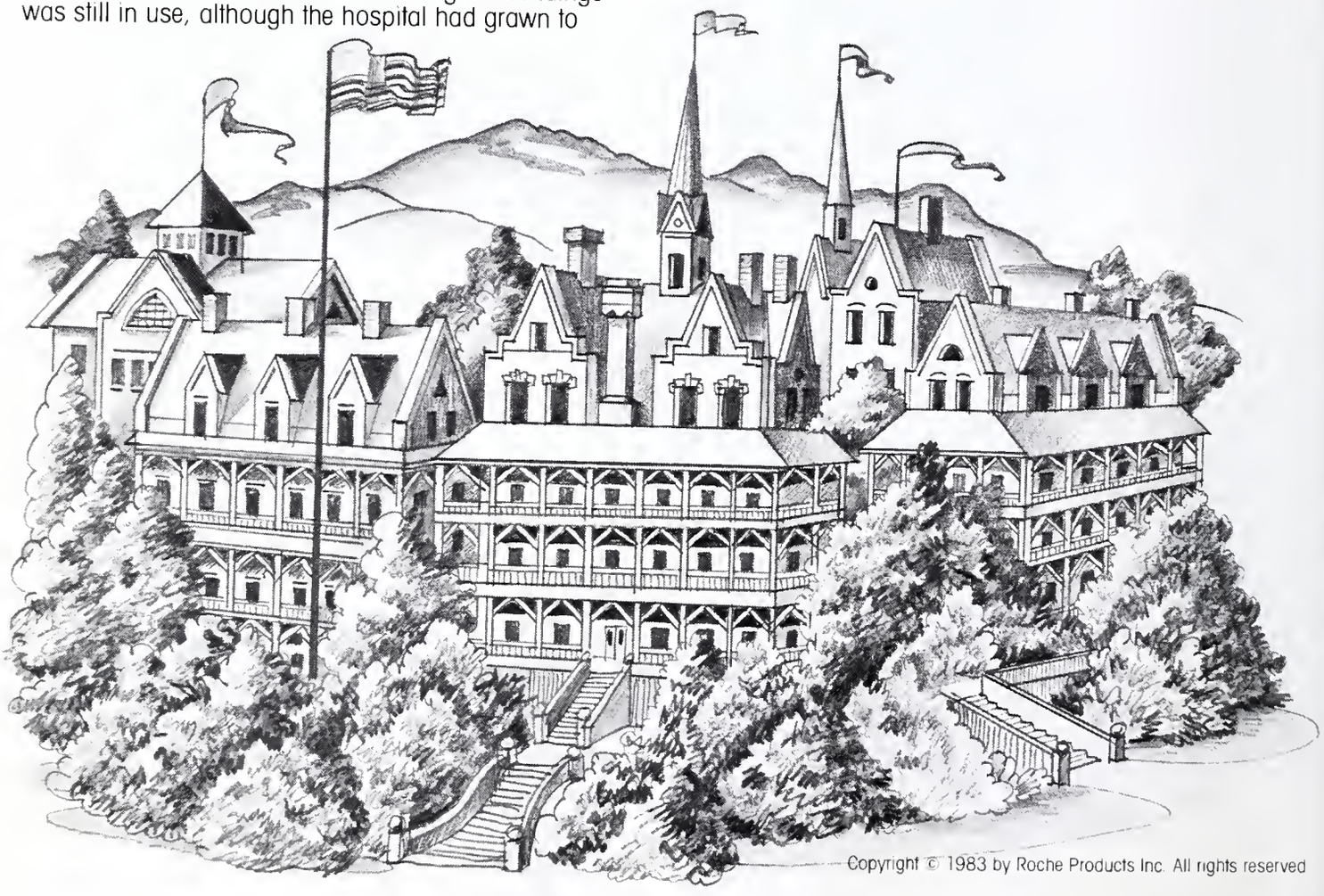
Well inta the 1970s, one of the original buildings was still in use, although the hospital had grawn to 59 buildings an 28 acres in all.[2] It remained a joint services facility until 1920, after which it served anly Army patients and continued to do sa for an additianal 38 years while retaining its original name.[2]

The state gets a bargain

In April 1960 it was deeded over ta the state af Arkansas far the legal sum of one dallar, and the state now runs it as the Hot Springs Rehabilitatian Center, a treatment and training center serving handicapped people in the entire Sauthwest.[2]

Hawever, as the first Army and Navy jaint services haspital, it was the historic precursar of medical care facilities far United States military and naval persannel throughaut the warld.

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The Significance of Measuring Body Fat in Medical Practice

James R. McNair, M.D.,* and Barry S. Brown, Ph.D.**

The typical Medical Examination includes an evaluation of body weight on standard scales followed by an interpretation from life insurance height-weight tables. The inaccuracies of assessing obesity from these tables have appeared in numerous medical and health journals,[3,25,26] yet the use of weight remains an accepted part of medical practice.

Past difficulties associated with the measurement of body fat, a more relevant factor in both the assessment and treatment of obesity, has placed analysis of patients' body fat on the "back burner." Now that accurate and simplified techniques of assessing percent fat through the measurement of skinfold thickness are available, the prospect of replacing weight with percent body fat measures has become a desirable trend in standard medical examinations.[1] The only remaining hurdle is to justify the need for measuring body fat (in lieu of body weight) in the typical medical exam.

The most obvious argument from a patient's viewpoint is the desire to "look better" and "feel better." This is reflected in the percent of fat in our body, not the amount of pounds on our frame. The height-weight charts were constructed by insurance companies to exclude the upper five percent in the population that represent insurance "risks." There is no basis for determining, from these charts, how much fat versus muscle tissue an individual possesses. Indeed, many athletes are 40-50 pounds "overweight" according to the height-weight tables, yet possess a very small percentage of body fat and should not lose any weight. Others may be close to their "ideal" weight, according to the tables, but, due to inactivity, malnutrition, or disease, have a low percentage of muscle tissue and a high amount of fat. The height-weight tables *do not* reflect what we, as patients and physicians, need and want to know.

Within the past five years, significant data has appeared in the medical literature which discusses the relationship between body fat and health. Below, you will find a list of topics relating body fat to body function, health, and disease from a medical and/or diagnostic viewpoint. At the end of each listed topic, a series of numbers appear within parenthesis, reflecting the references appearing at the conclusion of this manuscript.



Skinfold measured at the anterior portion of the iliac crest.

*For further information: James R. McNair, M.D., 1000 Medical Towers Building, Little Rock, Arkansas 72205.

**University of Arkansas Human Performance Laboratory, HPER, Fayetteville, Arkansas 72701.

[1]The use of SKYNDEX, an electronic body fat analyzer, that measures skinfold thickness and instantaneously displays percent body fat without calculations or resorting to charts, has even further simplified the process of body fat analysis.

This bibliographical list represents less than 10 percent of the available literature which has accumulated in the past 25 years, justifying the need for body fat analysis as part of the routine medical exam.

Topic	Reference
1. Hypothalamic function & body fat	(19, 30)
2. Body pressure & body fat	(11, 13, 35, 39)
3. Blood lipids & body fat	(13, 24)
4. Malnutrition & body fat	(1, 2)
5. Work capacity & body fat	(6, 9, 15, 17, 18, 22, 37)
6. Behavior, personality & body fat	(33, 38, 41)
7. Anaesthesia recovery & body fat	(32)
8. Intestinal bypass & body fat	(22)
9. Adolescent growth & body fat	(4, 10, 27, 29)
10. Coronary risk & body fat	(5, 16, 28, 34)
11. Menarche & body fat	(7)
12. Infants, children & body fat	(10, 14, 40)
13. Pregnancy, menstruation & body fat	(8, 21)
14. Intrauterine growth & body fat	(12)
15. Metabolism & body fat	(20, 23)

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Treatment Protocol for Acute Thrombophlebitis During Pregnancy

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THE AUTHOR

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ABSTRACT

Deep vein thrombophlebitis is a serious problem when it occurs during pregnancy. Diagnosis is difficult.

Treatment consists of heparin during pregnancy. Coumadin during pregnancy is contraindicated because of numerous fetal complications.

Women predisposed to thrombophlebitis should avoid pregnancy. If pregnancy occurs, a relatively normal outcome can be anticipated in about two-thirds of the pregnancies with a carefully managed anticoagulation program.

INTRODUCTION

Several cases of deep vein thrombophlebitis during pregnancy have recently been encountered. Calls to several consultants and a review of the literature failed to produce a clear-cut treatment protocol. Because of this experience, the following is presented.

DIAGNOSIS

Diagnosis of deep vein thrombophlebitis is difficult and often inaccurate in the non-gravid patient, and even more so in the gravid patient. One of the reasons for this is the physician is hindered by the fact that the state of the art tools, such as nuclear medicine and venography, are contraindicated because of the radiation hazard to the fetus. Although the literature on thromboembolic disease is voluminous, those data which concern thromboembolic disease in pregnancy are sparse by comparison.[1]

INCIDENCE

Deep vein thrombosis involves between 1.6 and 4.7 per 1,000 pregnancies.[2] These figures represent clinical events. The incidence of clinically silent deep vein thrombosis is probably much higher.[3] If you add superficial vein thrombosis, pulmonary embolism and deep vein thrombosis together, one in 70 pregnancies will be involved.[4]

TREATMENT

Once deep vein thrombosis has developed, anticoagulants are indicated,[14] but there is much controversy over their use during pregnancy because of the risk involved to the fetus. When anticoagulants are used during pregnancy to treat deep vein thrombosis, the maternal mortality rate is reduced, but the fetal death rate is increased.

If therapy is required early in pregnancy, you can anticipate a one-third fetal loss. If you fail to treat deep vein thrombophlebitis, you can expect a high incidence of maternal pulmonary embolus and post phlebitis syndrome.

Excluding experimental drugs, there are two major types of anticoagulants that can be used during pregnancy — heparin and coumadin.

Heparin is a large negatively charged molecule composed of a naturally occurring organic base which combines a plasma protein and becomes a very potent antithrombin and antiprothrombin agent.[16]

Unlike coumadin, heparin does not cross the placenta nor is it associated with fetal anticoagulation or anomalous development. Its effects are reversed relatively rapidly by the administration of protamine.[17]

Theoretically, heparin should be considered the anticoagulant of choice during pregnancy; however, caution is urged because in practice, heparin has not been shown to be an entirely safe alternative anticoagulant.

Pregnancies in which heparin has been used have had spontaneous abortions, excessive maternal deaths, fetal loss and premature delivery.[7-9] A recent report of 135 cases involving heparin revealed stillborns and deaths in one-third of the cases.[10]

Heparin use entails the additional inconvenience and complications of parenteral anticoagulation. Even though the risks with heparin are

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great, it is still recommended over compounds such as coumadin.

Fetal exposure to coumadin during the first eight weeks of pregnancy may cause abnormal development of the facial structures, hypoplastic digits, slipped epiphyses and mental retardation.

Midtrimester exposure to coumadin may result in optic atrophy, faulty brain growth and developmental retardation. Third trimester exposure may produce fetal anticoagulation, predisposing the infant to life threatening hemorrhage in the perinatal period.[6]

The seriousness of the hazards of these compounds should call into question the use of oral anticoagulants at any time during pregnancy. The use of coumadin derivatives during pregnancy is now contraindicated by the manufacturers.[10]

In order to minimize the hazards for the patient and fetus, therapy must be individualized.[15] Therefore, a logical program for anticoagulant therapy in pregnancy is necessary.

The following treatment routine is recommended following the diagnosis of deep vein thrombophlebitis during pregnancy: Place the patient on intravenous heparin and maintain at a therapeutic level for fourteen days. Following this treatment, convert the patient to subcutaneous heparin and treat as an outpatient until the onset of labor. At this time give her protamine and deliver.

In the immediate post partum period (six-eight hours), place the patient on subcutaneous heparin and coumadin. As soon as her prothrombin time reaches a therapeutic level, discontinue the heparin and maintain on coumadin for six weeks.

COMMENT

Pregnancy predisposes to deep vein thrombophlebitis. There is a sixfold increase of a thromboembolic event during pregnancy.[5] Women who require anticoagulation during pregnancy should be informed of the potential for defective fetal development and of the threat to successful completion of the pregnancy.

Because of the substantial risks of both classes of anticoagulants, and the inherent risks of pregnancy complicated by the indications for anticoagulation, prevention of pregnancy is usually indicated.[10] If pregnancy occurs, a relatively normal outcome can be anticipated in about two-thirds of the pregnancies with a carefully managed anticoagulation program.

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Another Use of the Laser: A New Treatment for Open-Angle Glaucoma

Morriss M. Henry, M.D.*

In recent decades, ophthalmologists have used the laser for treatment of many eye problems: to stop the proliferation of blood vessels and hemorrhaging in the eyes of diabetics, preventing many a diabetic from going blind; to burn a new hole in the iris, a procedure called iridectomy, used for narrow-angle glaucoma; to seal off tears in the retina; to destroy tumors in the eye; and to dilate the pupil when other methods have failed.

Recently yet another use has been found for the laser in the treatment of the eye: to aid in lowering ocular pressure of open-angle glaucoma patients.

Glaucoma is still one of the leading causes of blindness in persons over 40, largely because it is undetected and therefore untreated in persons who lose their sight from it. In the great majority of patients whose glaucoma is known and treated regularly, blindness can be prevented.

Most cases of glaucoma can be controlled by use of eye-drops or tablets taken orally to control eye pressure. However, no one medication helps every glaucoma patient, and one that has worked for some time may begin to fail to keep pressure under control.

Various combinations of medications are often used to keep ocular pressure down over a long period of time. It is therefore important for the ophthalmologist to monitor the glaucoma patient's eye pressure regularly.

When a combination of medications fails to keep eye pressure under control, the usual next step is to do surgery to create a drainage passageway to drain excess fluid from the eye. Even if the need for medication continues after surgery, it can help the patient whose pressure can no longer be controlled by medication alone.

But another treatment has now come into use: the laser has been employed successfully to reduce ocular pressure for some glaucoma patients. The laser beam is aimed into the trabecular meshwork covering the canal of Schlemm, and multiple burns are created on the meshwork. Just why this procedure succeeds in lowering ocular pressure is not yet clearly understood.

Although knowledge of the use of the laser for glaucoma treatment is still being developed, and long-term results are unknown at this stage, it is sometimes used to avoid the need for regular medication in cases where physicians judge that patients will be unable to use eye-drops consistently. However, the primary advantage of the laser in treatment of open-angle glaucoma seems to be the possibility of avoiding the need for glaucoma-filtering surgery.

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ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 442)

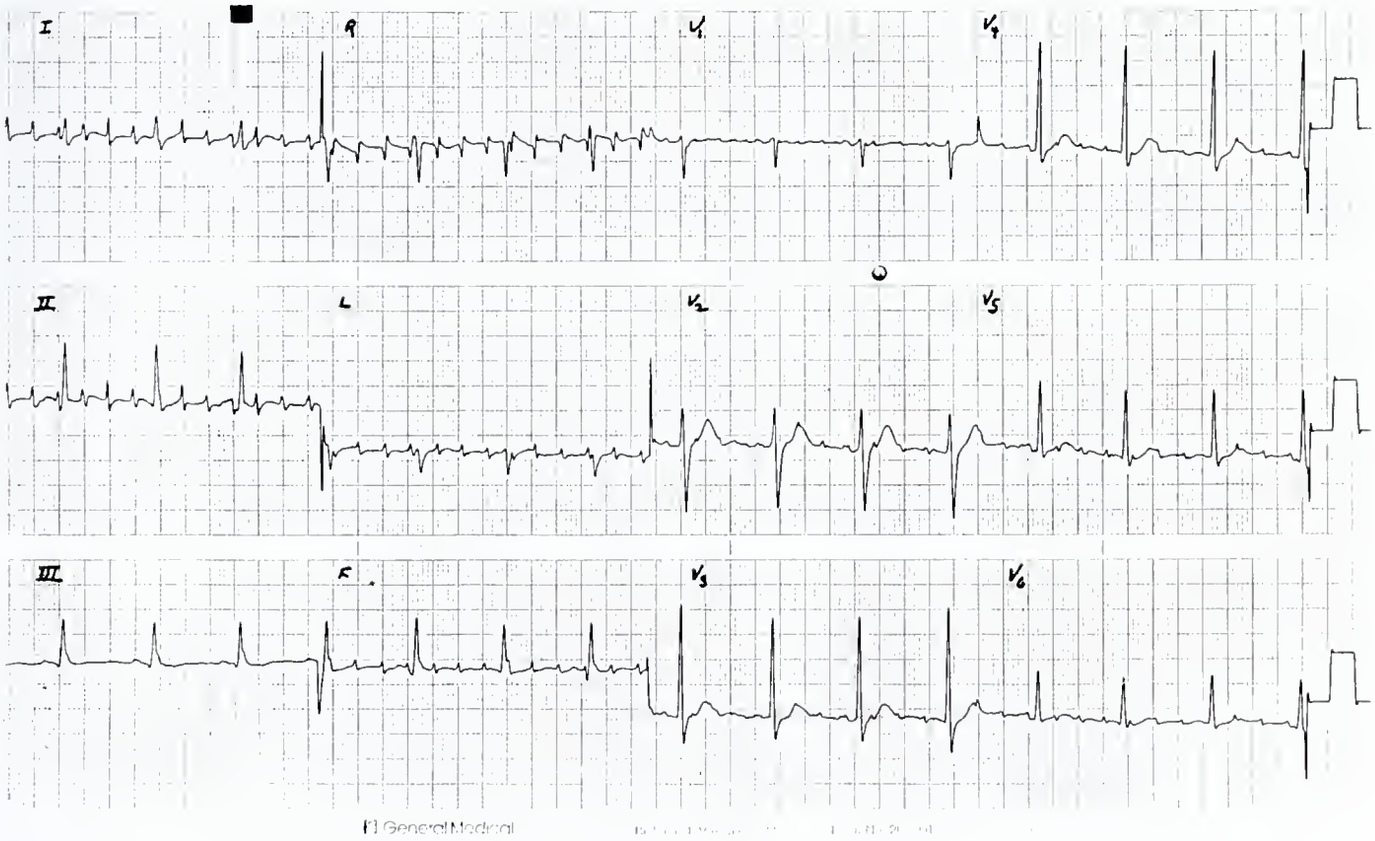
HISTORY: A. P. is a 74-year-old patient with Parkinson's Disease. The patient takes Bromocriptine, Sinemet, and Symmetrel. He has no history of heart disease. On physical examination, he had a tremor but has normal pulsations in his neck veins and a normal cardiac examination. Based upon his electrocardiogram, you should:

A. Treat him with Lanoxin.

B. Electrically cardiovert his arrhythmia.

C. Treat him with calcium channel blockers.

D. Do none of the above.



Ray H. Hall, M.D., and John W. Watson, M.D.

UAMS-LRVAMC Division of Cardiology

Little Rock, Arkansas



Office Orthopaedics

"Metatarsalgia"

H. Austin Grimes, M.D.*

Metatarsalgia, or forefoot pain, most frequently results from alterations in the weight bearing position of the metatarsal heads, usually the second, third and fourth. The next most common cause is due to derangement of the first plantar pad with inflammation of the tendons of the flexors of the great toe and/or sesamoid tenderness. After these two disorders, the other fairly common affectations of the forefoot are pressure keratoses, verruca plantaris, Morton's neuroma formation, Freiberg's osteochondrosis, stress fractures of the metatarsal neck, tumors, scars and ulcers.

Other disorders less commonly seen in office practice are rheumatoid arthritis and gout which cause some of the same afflictions noted, but the underlying disease process usually requires treatment as well as the presenting complaint.

Plantar prominence of the second, third and fourth metatarsal heads requires a surgical correction to give lasting benefit and one of the more popular of the procedures designed to do this shortens the metatarsal bone itself. Relief to varying degrees occurs with the use of a metatarsal bar added to the sole of the shoe with a 1/4-inch drop-off and attached to the sole of the shoe so as to relieve pressure of weight bearing when properly placed.

Kelikian emphasizes the fact that the transverse arch exists in the midfoot and not at the level of the metatarsal heads. All the metatarsal heads participate in weight bearing and therefore metatarsal pads inside the shoe do not restore the transverse arch and often cause more pain. If relief of the metatarsal head pressure keratoses is attempted nonoperatively, then a metatarsal bar added to the sole of the shoe after the weight bearing area is more effective.

Sesamoiditis, which is evidenced by exquisite point tenderness, is frequently caused by unusual stress to the area in such activity as dancing or unaccustomed sports activities. One group in Toronto (Greyson, et al) suggest radionucleotide scanning as a diagnostic tool if necessary, as the usual clinical and radiographic diagnosis is difficult. Treatment consists of rest, proper shoe fitting and when unsuccessful, surgical extirpation of the offending sesamoid or sesamoids. X-rays in fully one-third of the cases show bipartite or multipartite formation of sesamoid bones and when present, there stands a 60 percent chance of it being bilateral. This fact should be taken into account in assessing x-rays of the forefoot so as to avoid diagnosing a fracture of the sesamoids in an exquisitely tender acute episode. Tangential view of the sesamoids often will show the thinning and osteophyte formation associated with long-standing inflammation.

Hammer toes and claw toes alter the position of the weight-bearing pads under the metatarsal heads and are relieved by metatarsal bars also, but when unsuccessful, surgery of the proximal phalanges and often syndactyly to the adjacent normal toe is indicated.

Verruca plantaris and pressure keratoses are distinguished by occurring more often in the young with a brownish core in the former whereas in the latter a pearly core occurring mostly in the older patient presents. Verrucae are most

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likely due to a filtrable virus and avoidance of public showers, bathmats, etc., are to be recommended as well as antiseptic, surgical excision and cryotherapy. In treatment of pressure keratoses, they respond more lastingly to surgical shortening of the metatarsal bone with excision of the metatarsal head and syndactyly of the adjoining normal toe.

Morton's neuroma classically occurs between the third and fourth toes and pain can be accentuated by compressing the metatarsal heads. Occasionally, infiltration with local anesthetic without Epinephrine may give a dramatic relief temporarily, but neurectomy is the treatment of choice in most instances.

Stress fractures or March fractures occur at the second metatarsal neck but may occur at any of the others. Initially the radiographs may not show the fracture but in a few days will exhibit the fracture line or the healing callus and confirm the diagnosis. Treatment consists of rest to the part from weight bearing and sometimes the pain will only be relieved by application of a short leg walking cast.

Freiberg's osteochondrosis or infraction is ischemic necrosis of the second metatarsal head and related to similar osteochondroses in other growth centers. A metatarsal bar used to relieve pain may help but a surgical exision plus syndactyly to the adjacent normal third toe gives more lasting relief.

Tumors of the forefoot are seldom reported and run the gamut of diagnoses from fibromas to cysts and include lyponas, myomas, neuromas, angiomas, xanthomas, glomus tumors and even synoviomas and melanomas.

Plantar fibromatosis, akin to Dupuytren's contracture, is the most common benign tumor and pressure relief is recommended rather than surgical excision due to the higher recurrence rate following extirpation. At times, extra depth orthopedic shoes with plastizote inserts are needed for adequate pressure distribution in weight bearing. Diagnostically, except for the glomus tumor, malignancies are more painful than benign tumors and surgery is recommended for all others except the fibromatoses.

Ulcers and scars from other disease processes are another source of forefoot pain and include lesions of diabetes and spina bifida which often are not thought to be painful. Diabetes accounts for approximately 70 percent of the lesions and resection of the metatarsal head along with a portion of the diaphysis will often allow these ulcers to heal.

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EDITORIAL

Blue Thoughts

Alfred Kahn, Jr., M.D.

Great economic tides often bring monumental sociologic changes. Sometimes the results are good. Sometimes the results are bad. Sometimes the results are mixed. The USA is in the grip of a severe depression and the economic pressures on individuals with limited income are tremendous. Those who remember the depression of 1929 recall that as demand for items decreased, merchants and sellers of services cut their prices in an effort to sell their goods and services. In our current so-called recession, the buying public often has a decreasing income and, despite this, prices have gone up. Many similar items have virtually doubled in price in the past four or five years, whereas incomes have grown modestly or shrunken or disappeared due to lay-offs. Thus, the buying public has had to re-establish a system of priorities in buying rather than the carefree impulse purchasing which was done a few years back.

There is no denying that many Americans prefer buying objects to services. There are probably no truly accurate statistics concerning this. Popular opinion has it that the buying public strongly prefers buying "things" to buying "services." Given a limited income, associated with decreased purchasing power, the working man and working woman have to pay careful attention to the priority of their expenditures. Furthermore, big organizations which negotiate with labor also have had to pay great attention to the expenditures which they are willing to make as a result of labor negotiations. So-called fringe benefits in labor negotiations can represent vast sums of money and sometimes hidden costs are monumental. The extension of this reasoning to the field of health services is fairly straightforward. The employers have a limited amount of money to expend on fringe benefits such as health care. Secondly, the health insurors have to operate "in the black" or they will soon become defunct; their premiums have to cover their expenses – administration plus payment of benefits to policy holders.

This is one side of the coin, but the obverse is equally important. In a capitalistic society, physicians traditionally have set their own fees – this is part of the economic tradition of the free enterprise system. This does not mean that there is room for gouging – there are safeguards to prevent this in the medical societies and in the courts. It does imply that a private physician can set a reasonable fee and accept whatever an insurance company pays as complete or partial payment of his fee. It has always been understood and implied except in federal programs, which have a limited amount of money and are usually for the very lowest economic class, that any insurance payment less than the usual and customary fee can be supplemented by an additional bill to the patient. This seems imminently fair. Except in accident cases or chronically ill cases, the patient can always ask ahead of time the amount of the anticipated fee for service.

This status quo has recently been challenged by at least one insuror. The thrust of the insurors' demands are philosophically frightening. The insuror has stated with complete accuracy that the company is under pressure from customers who buy group plans to limit costs. Secondly, it cannot be denied but what insurors are having difficulty operating "in the black." Lastly, it cannot be denied that some individuals are in stringent circumstances financially. But does the economic tide that brought about this set of circumstances justify a partial destruction of the free enterprise system and a partial threat to the usual and customary practice of ethical physicians, namely of setting their own fees.

Should a third party set the physicians' fees?

Should a third party, whether a government agency or a virtually monopolistic insuror, have the power to tell a physician what to accept as payment for service? Actually, it should be made clear, but at least one insuror has said in effect, "Look, we are not going to tell you what to charge, but if you do not accept our fee as payment in full, we are not putting you on a published list of physicians; this list will tell the patients these physicians work with us and will not charge you more than a fee which the insuror set." In fact, the physician has to agree that he cannot bill the patient for services which are disallowed even though he thinks the services needed to have been performed. The physician has to accept the usual and customary fee and is not at liberty to accept his own fee even though he may feel the usual and customary fee is totally inadequate. The plan presented by one particular insuror becomes almost a bludgeon because of the large number of subscribers who buy its services.

One such plan as described above states in a brochure outlined to physicians that it will result in less paperwork. This has been researched by some competent personnel who work in this area and who state that it will result in more paper work. This same plan locks the physician into a contract for 90 days at a time without clearly stating in the brochure that the payment to the physician will be increased or decreased during that period. Of particular importance to many physicians are disallowed services where there is a general disagreement with the insuror and physician as to what is necessary for the appropriate care of the patient. The same brochure states that there will be rather strict interpretation of how the paperwork will be filed — there are disallowed attachments, etc. Lastly, this particular plan states that if a physician does not agree to join their group plan any and all payments will be made directly to the patient and not to the physician.

In short, plans such as this are philosophically contrary to the free enterprise system provided there are safeguards against gouging. Plans such as this, with published lists, represent serious threat to our current economic system as there is no economic freedom of choice. Thirdly, the plan does not allow for disallowed charges to be collected from the patient. Fourthly, although there is some limited ability to charge a slightly higher fee in special cases, in general the physician is locked into the fee scale provided by the insurance company. Fiftly, this type of plan might be taken up by other insurance companies and this could be extremely destructive to the practice of medicine and would, in a sense, be somewhat similar to socialized medicine as practiced abroad — abroad, the government collects the cost of medical care and is the payor; in this case, large private companies would be, so to speak, the enforcers of a similar system.

Overall, in a country which prides itself on free enterprise and the capitalistic system, any attempt to control medical fees in the manner described above represents a serious threat to the style and practice of medicine to which our republic is accustomed. Physicians and other interested parties should refuse to accept real or implied coercion from large companies and from the government — or what is freedom all about?

"From Other Years"*

The Journal of the Arkansas Medical Society
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THE RESIGNATION OF DR. HOOPER

Dr. P. O. Hooper, who has been connected with the State Lunatic Asylum from its very inception, first as a trustee, and later as superintendent, surprised his friends by tendering his resignation on the first of this month.

The Lunatic Asylum is the only State institution entirely under the direction of members of the medical profession, and its successful, not to say brilliant, management under the superintendency of Dr. Hooper has been a source of just pride not only to the entire medical profession of the State, but of every citizen as well. It is an institution which is a source of pride to the citizens of Arkansas, and of surprise to visitors from other States. The buildings, designed, erected and added to under the personal supervision of Dr. Hooper have been selected as models for more

recent structures of the kind in other States. The management has also been a beneficial example to other institutions.

Dr. Hooper did not give his reasons for presenting his resignation, but from statements in the public prints, it is believed to have been caused by friction between the superintendent and the present board of trustees, or at least certain members of the board. The nature of these differences has not been stated, but there is reason to believe that they may be the result of presumptuous ignorance on the one hand, and a philanthrophic, broad-gauge, intelligent management on the other.

Whatever the cause of the resignation, it is hoped that it may be recalled, and that the State may continue to have the benefit of Dr. Hooper's able management. The loss of his services at this time can only be considered as a calamity to the institution and the unfortunates who are its inmates.

If, however, Dr. Hooper cannot be induced to reconsider his action, The Journal most emphatically asserts that such an institution must not be turned over to place-hunters and politicians.

In the days of the hottest politics in Arkansas — in the days of carpet-bag rule — no adventurer had the temerity to lay his hands on that institution, either during the formative period of its existence or since, and the man or the men who attempts or attempt to advance personal or party interest at the expense of the unfortunate "wards of the State," should be hurled from position with all the indignation honest, philanthrophic men are capable of feeling.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

Richard S. Schweiker, Secretary of the Department of Health and Human Services (HHS) for the first two years of the Reagan Administration, resigned earlier in the month. It was reported that Schweiker would become president of the American Council of Life Insurance, a lobbying organization for the insurance industry. Schweiker's unexpected departure was preceded by the earlier resignation of HHS's number two man, Under Secretary David B. Swoap who returned to California to head that state's welfare agency.

President Reagan has nominated former Republican Representative Margaret Heckler of Massachusetts to suceed Schweiker. Heckler, considered a moderate, was defeated in last November's election. She is an attorney, an advocate of women's rights and is pro-consumer; however, she is strongly opposed to abortion. Heckler is the second woman to be appointed to the Reagan Cabinet. Elizabeth Dole, wife of Senator Robert Dole (R-KS) was recently named to head the Department of Transportation. Heckler's appointment must be confirmed by the U. S. Senate.

Schweiker had earned a reputation for loyalty in the administration as he faithfully carried out policies aimed at reducing the size and expense of programs within his Department. Prior to being appointed to the HHS post, Schweiker had served two terms as a U. S. Senator from Pennsylvania and four terms as a member of the House of Representatives.

Joseph F. Boyle, M.D., AMA Board Chairman and AMA President William Y. Rial, M.D., in a joint statement said: "We commend Dick Schweiker for his helmsmanship of HHS in difficult times. We congratulate Margaret Heckler as Secretary Designate — but because the position of HHS Secretary is such a difficult and important one, some reservations need to be expressed. HHS, the government's biggest agency, would be more manageable and effective if it were divided into a separate Department of Health and a Department of Human Services.

"Further, it would have served the public's interest if the Administration had sought the counsel of major associations involved in health care delivery before making this appointment. While we are surprised and deeply disappointed at the process, we are anxious to know Secretary Designate Heckler's views on health care and to share ours," the AMA officials added.

In a ceremony in the East Room of the White House, former Rep. Margaret Heckler was nominated for what she called "the hardest assignment in Washington," replacing Richard Schweiker as HHS Secretary of the Health and Human Services.

An hour after Heckler was nominated to replace Schweiker, presidential adviser Ed Meese told a luncheon that Social Security Commissioner John Svahn would become the new HHS Undersecretary, replacing David B. Swoap.

The shakeup caught both Administration and HHS officials by surprise, and brought to the forefront of the government's largest agency a 50-year-old lawyer who on Capitol Hill is considered to be a strong feminist with one major exception — she opposes abortion.

Despite her reputation as a liberal Republican, the former Rep. Heckler was considered a "loyal soldier" of the Reagan Administration on almost every issue except those involving women's rights. She split with the major activist women's groups only on one important point — abortion. As a Roman Catholic and the representative of a district with a large Catholic population, she was a strong anti-abortionist. She made a determined effort to avoid an anti-Equal Rights Amendment plank in the 1980 Republican platform.

Calling Reagan "the finest President I have known," Heckler said at her nomination ceremony, "It is with a sense of faith in your vision and goals for America that I accept . . ." She lost her House seat last fall to Democrat Barney Frank.

Schweiker's main role as HHS Secretary was to act as a buffer between the Reagan Administration and the army of critics in Congress seeking to prevent Administration cutbacks in social programs. He used his eight years' experience as a representative and 12 as a senator to defuse some of the hostility toward Reagan's programs.

Heckler, a 1956 graduate of the Boston College Law School, will run the biggest agency in the federal government, with an annual budget of $300 billion, of which Social Security commands $170 billion, Medicare $50 billion, and Medicaid $20 billion. The Reagan Administration was known to be anxious about improving its image with women and the sudden elevation to cabinet rank of first, Dole, and now, Heckler, is seen as a significant move in that direction.

Schweiker's sudden departure was the second Cabinet resignation in a week and the fourth in the Reagan Administration. Transportation Secretary Drew Lewis, like Schweiker a Pennsylvania moderate, resigned earlier this month. Previously, Secretary of State Alexander Haig and Energy Secretary James B. Edwards left the Reagan team.

Schweiker's two years in the Reagan Cabinet were stormy, with fights over welfare, medical programs, health insurance, and Social Security. He had a running feud with Budget Director David Stockman and only last month had to appeal directly to the President to win back proposed cutbacks of $500 million that would have gutted the U. S. Public Health Service. Schweiker also had been excluded from White House task forces to reform the Social Security system and hold down the cost of medical care.

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The Administration has entered its latest ploy towards its long-awaited proposal to inject more competition into the health care economy.

Speaking before a recent national health maintenance organization (HMO) policy conference in Washington, White House health consultant David A. Winston said he had reason to believe a competition policy would be introduced "very soon." The annual meeting was sponsored by the Group Health Association of America and the American Association of Foundations for Medical Care.

Winston, an unpaid special consultant with responsibility for coordinating the development of an Administration strategy for health care reform, predicted that the proposal would include a so-called "tax cap," limiting the dollar amount of health care benefits that are non-taxable to the employee, and mandatory cost sharing for certain Medicare patients. Winston, currently a first vice president in the Washington Office of Blyth Eastman Paine Webber Health Care Funding, formerly was minority health staff director for Sen. Richard Schweiker when the outgoing HHS

Secretary was a ranking minority member of a Senate Labor and Human Resources health subcommittee.

Winston was less optimistic about the proposal's chances for enactment, saying he could not predict whether such a proposal would pass. He was convinced, however, that top-level Administration officials were committed to making the health care system more responsive to price.

Discussing why the Administration's plans for a so-called "pro-competition" proposal had lagged for two years, Winston said the Administration assessment was that "almost anything would irritate almost everyone."

For a period, Winston said, "we thought seriously that the smartest political thing" was to do nothing. More recently, data on current and projected health care expenditures made the Administration take notice of a pressing need for change, he added.

Winston said the $56.4 billion spent on Medicare this year would grow, by conservative estimate to $100 billion in 1987, if no reforms were enacted. Six weeks ago, health care experts, briefing the President and other top Administrative officials, estimated that total health care expenditures in the nation would grow to $798 billion by 1990 if the current system was allowed to stand.

In its desire to stem this growth, the Administration hopes to protect itself fiscally and to "address the reasons" for the growth to correct the "dislocations in the private sector," referring to the cost shifting to private patients when the government limits its reimbursement policies.

Winston said that after several weeks of intensive meetings with providers, payers and employers, there appeared to be a "schism, a rather natural division" of opinion. The purchasers, including insurers, employers, and unions, "would like to prevent any proposal from enactment" and would prefer that the government turn to revenue control over providers.

Acknowledging that the Administration was supporting an unpopular proposal, Winston said everyone would suffer "a certain amount of pain" and undergo constraints to accomplish the long-term goal of helping consumers become more prudent buyers of health care.

The prudent buyer concept is a familiar one to health economist Alain Enthoven, Ph.D., a professor in the Graduate School of Business at Stanford U. Dr. Enthoven, who has for five years been an advocate of competitive approaches to health system reform, disagrees with the proposal to enact mandatory co-payments, noting that recent studies indicate that the great majority of hospitalized patients exceed their co-insurance limit, diluting the provision's intended effect of stemming demand.

Dr. Enthoven argued, however, for the need to limit an employer's contribution to health insurance premiums that are tax-free to employees. Appealing to his audience, Dr. Enthoven said that a cap of $150 per month on an employer's contributions "would be good for HMOs and other organized systems" of care, since employees would be encouraged to select a plan that would not add taxable benefits to their salaries.

The current system of allowing employers to give workers unlimited untaxed health care benefits is "subsidizing the rich," Dr. Enthoven said. A family health insurance plan would be worth, on the average, $83 a year to a household with a $10,000 to $15,000 income and $622 a year to a household earning $50,000 to $100,000.

The difference, Dr. Enthoven said, is between tax brackets of households and what their tax liability would be if health insurance were taxed.

"It's wrong to cut Medicare and Medicaid beneficiaries, who can least stand to lose, while leaving tax exclusions," for the well-to-do, he said.

Legislating mandatory tax liability for health insurance premiums that are over $150 per family monthly would produce a $25.7 billion revenue gain this year, Dr. Enthoven said, helping the federal government move toward a balanced budget. Arguing the proposal's political feasibility, he pointed out that employers now had similar constraints on the amount they are allowed to contribute tax-free to an employee's life insurance.

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Despite a slowing growth rate of enrollees in health maintenance organizations (HMOs), there are "some real gains" in the numbers, says Frank Seubold, Ph.D., Acting Associate Director for HMOs in the federal government's Bureau of HMOs and Resources Development.

Speaking on a panel discussing the federal HMO program during the national policy conference, Dr. Seubold said that 10.83 million Ameri-

cans now enrolled in prepaid plans represented a 5.5 percent increase over past years. In recent years, the industry experienced annual growth rates averaging about 12 percent.

Painting a positive picture of the slowdown, Dr. Seubold pointed to some areas of growth within the industry. For example, there now are 19 HMOs with more than 100,000 members, compared with 11 plans in 1977 and six plans in 1972. In addition, 96 plans have more than 20,000 members, compared with 42 plans in 1977 and 22 plans in 1972.

Of the 70 standard metropolitan statistical areas (SMSAs) with more than 500,000 population, HMOs are established in each, serving some 115 million people. This means that more than half the nation has the opportunity to join a prepaid plan, Dr. Seubold said. Where plans are established, he said, they flourish. In six states, HMOs' enrollment grew more than 50 percent last year, representing a gain of 140,000 subscribers.

Alluding to their reasons for success, Dr. Seubold said that during the past 10 years, while premiums for high-option family plans under Blue Cross had increased more than 300 percent, the average HMO premium had increased 206 percent. During the open enrollment season in May, 1982, preliminary figures indicate that HMOs gained more than 42,000 new members — an 11 percent increase — while Blue Cross-Blue Shield lost more than 160,000 members.

According to government statistics, the premium cost between the average HMO and family high-option coverage under Blue Cross and Blue Shield has increased from an $8 price advantage for the HMOs in 1981 to a $48 difference during the most recent open enrollment in November, 1982. Of 103 HMOs, only seven have premiums higher than Blue Cross-Blue Shield.

Theodore Weinberg, Director of the Bureau's Division of Compliance, said 1982 was a "good year," with the HMO industry coming a long way over the past five years. He said there now were fewer organizations needing government assistance to maintain a sound operation. He attributed the improvement in part to "managerial growth" within the industry. In 1982, Weinberg said, two HMOs had their qualifications revoked, while such action was taken against 14 plans the previous year.

In December, 1982, there were 29 HMOs under scrutiny for non-compliance, with a large number close to meeting requirements for restoration of their qualification status. The 29 represent 20 percent of the total number of federally qualified HMOs, down from 31 percent of the industry in compliance activity the year before.

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In a carefully worded position paper on the insanity defense, the American Psychiatric Association (APA) has criticized a legal system that calls upon psychiatrists to testify beyond their medical expertise into matters of law and morality.

The statement, the first on the topic to be developed and adopted by the APA, is expected to spark heated debate among forensic psychiatrists, trial attorneys, and civil libertarians. Although the APA says in its foreword to the 23-page text that the statement "reflects the current thought and opinion of the vast majority of psychiatrists who are informed and concerned about the insanity defense issue," the report includes recommendations that are likely to create controversy within the profession.

Certain to irk psychiatrists who frequently testify as expert witnesses are APA's guideline on what Loren Roth, M.D., calls the "useful and scientifically valid role" for psychiatrists in the implementation of the insanity defense. Dr. Roth, Director of the law and psychiatry program at Western Psychiatric Institute in Pittsburgh and Chairman of the APA work group that wrote the statement, called this the most important recommendation in the new APA policy.

In a telephone interview with *American Medical News,* Dr. Roth said psychiatrists had been called upon to answer "ultimate issue" questions, such as whether a person is legally insane or had the capacity to appreciate the criminality of his conduct.

When such questions are posed, psychiatrists should decline to answer, he said, limiting their expert testimony to the "defendant's psychiatric diagnosis, mental state, and motivation at the time of the alleged act so as to permit the jury or judge to reach the ultimate conclusion about which they and only they are expert." When psychiatrists try to determine whether a defendant is legally insane, they are going "beyond their expertise, passing from the realm of psychiatry

into the realm of morality and law," Dr. Roth said.

Although Dr. Roth said he would refuse to answer questions of legal insanity on the witness stand, such a response probably would cause him not to be called as an expert witness in most cases. The practice in most states, Dr. Roth said, is to ask psychiatrists such questions.

The statement's second most important recommendation, Dr. Roth said, suggests guidelines for legislation dealing with the disposition of violent people who are found not guilty by reason of insanity. According to the statement, this is the most significant area for reform in the current administration of the insanity defense.

The paper comes down hard on states in which hospitalized insanity acquittees who have committed previous violent offenses can be released if future dangerousness cannot be demonstrated. The statement noted that while some insanity acquittees will "recover" after psychiatric hospitalization, "there can be no public guarantee."

After initial hospitalization, the statement continues, "a long period of conditional release" with "careful supervision and outpatient treatment" will be necessary to protect the public and to complete the appropriate treatment programs.

"Unfortunately," the statement notes, "many jurisdictions have neither the trained personnel nor appropriate outpatient facilities and resources to provide for such close management of previously violent persons who are conditionally released."

Recognizing that because it will not be possible to release some acquittees because of the risk to society, the lack of resources, or other legal considerations, the APA paper points out that "because psychiatry has no more to offer the acquittee, continued confinement cannot be justified on therapeutic or psychiatric grounds."

With such lack of justification, "the psychiatric facility becomes a prison," the report notes. "This hypocrisy must be confronted and remedied." The report suggests as an appropriate alternative transfer of responsibility for any confinement of such acquittees to a "non-treatment facility that can provide the necessary security."

Pointing out that this recommendation may be the most controversial in the report, particularly among civil libertarians who think the recommendation is unduly harsh, Dr. Roth said: "As psychiatrists, we don't want to act as agents of social control and provide imprisonment. Yet we feel this is a dilemma that should be brought to the attention of the public."

On the question most hotly debated by the general public — should the instanity defense, which was used successfully in the trial of John Hinckley, who shot President Reagan in 1981, be abolished — the APA gave a loud and clear "no!"

Retention of the defense, the statement said, "is essential to the moral integrity of the criminal law." APA also came out strongly against the approach, now being used in nine states, of adopting a "guilty but mentally ill" verdict.

Instead, the APA recommended a narrower definition of the type of testimony given by a psychiatrist regarding a defendant's understanding or appreciation of his act. Although the report does not call for outright elimination of psychiatric testimony about a defendant's so-called "volition," it notes that "many psychiatrists . . . believe that psychiatric information relevant to determining whether a defendant understood the nature of his act, and whether he appreciated its wrongfulness, is more reliable and has a stronger scientific basis than, for example, does psychiatric information relevant to whether a defendant was able to control his behavior.

"The line between an irresistible impulse and an impulse not resisted is probably no sharper than that between twilight and dusk." The report also noted that "many psychiatrists therefore believe that psychiatric testimony . . . about volition is more likely to produce confusion for jurors than is psychiatric testimony relevant to a defendant's appreciation or understanding."

The APA also endorsed a standard, recently proposed by R. J. Bonnie, an attorney at the Institute of Law, Psychiatry, and Public Policy at the U. of Virginia, Charlottesville, that would permit "relevant psychiatric testimony to be brought to bear on the great majority of cases" in which criminal responsibility is at issue.

The standard says that "a person charged with a criminal defense should be found not guilty by reason of insanity if it is shown that as a result of mental disease or mental retardation he was unable to appreciate the wrongfulness of his conduct at the time of the offense.

As used in this standard, the terms mental disease or mental retardation include only those severely abnormal mental conditions that grossly and demonstratably impair a person's perception

or understanding of reality and that are not attributable primarily to the voluntary ingestion of alcohol or other psychoactive substances."

Dr. Roth described this standard as "halfway between" the two tests — commonly known as M'Naughten (used in about half the states) and American Law Institute or ALI (used in the other half and in federal courts).

The APA statement was developed by a four-person work group that the organization established last summer after the Hinckley verdict. The group worked under the aegis of the APA Council on Government Policy and Law, chaired by Alan A. Stone, M.D., Touroff-Glueck professor of law and psychiatry at Harvard U. The document was approved by the Association's Assembly, its governing body, in late October, and by the Board of Trustees in late December. More than 75 experts on the insanity defense issue reviewed and commented on it before its approval.

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The American Psychiatric Association suggested the following guidelines for legislation dealing with the disposition of violent persons acquitted on insanity grounds:

- Special legislation should be designed for people charged with violent offenses who have been found not guilty by reason of insanity.
- Confinement and release decisions should be made by a board, similar to a parole board, that includes psychiatrists as well as other professions representing the criminal justice system.
- Release should be conditional upon having a treatment supervision plan in place with the necessary resources available to implement it.
- The board with jurisdiction over released insanity acquittees should have clear authority to reconfine.
- When psychiatric treatment within a hospital setting has obtained the maximal treatment benefit possible but the board thinks that for other reasons confinement still is necessary, the insanity acquittee should be transferred to the most appropriate non-hospital facility.

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The elderly benefit from home health care, but expanding such programs will not reduce overall health care costs, reports the General Accounting Office (GAO), the congressional watchdog organization.

Home health care advocates have said that their programs can save money by taking some elderly patients out of hospitals and nursing homes and caring for them at home through frequent visits of health care professionals.

Despite frequently lower costs per patient, though, expanding home health services may increase the government's total health care cost because more people would be treated, the GAO found.

The report, which was based on a survey requested by Sen. Orrin Hatch (R-UT), did say that elderly people served by professional health and homemaker services live longer and are more satisfied than those without the services.

"This report says it may be cheaper to let things stay as they are because it doesn't cost anything to deny treatment to people," Hatch remarked. "I consider that dollar-wise, but people-foolish."

Hatch, Chairman of the Senate Labor and Human Resources Committee, is chief sponsor of a bill that would expand home health services to rural and inner-city areas where they are now unavailable. The bill has passed Hatch's own committee and is now in the Senate Finance Committee.

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The American Medical Political Action Committee (AMPAC) has given strong support to the nation's political action committee (PAC) movement before a Senate committee looking into campaign financing and possible election reform.

"PACs provide a means by which individuals and groups can exercise their rights of freedom of speech and association said Fred C. Rainey, M.D., Board Chairman of AMPAC and family practitioner of Elizabethtown, Ky. "They provide a means by which individuals can become more actively involved in the political process. They provide financial and other assistance to candidates for public office. And they provide information which helps us to understand the political system better and helps the system to function more effectively."

Senator Charles McC. Mathias (R-MD), Chairman of the Senate Rules Committee opened the hearings by citing 1982 as the country's first bil-

lion dollar election and called for public financing of federal elections.

Dr. Rainey provided the committee with a survey of public attitudes toward public financing of congressional elections in March of each year from 1977 through 1982, saying "these surveys show that the American public is overwhelmingly opposed to public financing of congressional elections.

A number of other witnesses bore Dr. Rainey out, one saying that public financing should be available in the beginning "to build a platform to speak from" for the relatively unknown candidate, but that the American public should be permitted unlimited participation in federal elections as long as the source of all funds were reported.

Dr. Rainey told the committee that AMPAC was founded in 1961 to promote and strive for "the improvement of government by encouraging and stimulating physicians and others to take a more active and effective part in government affairs; to encourage physicians and others to know and understand the nature of their government, the important political issues and the records of office holders and candidates; and to assist physicians and others in organizing themselves for more effective political action and in carrying out their civic responsibilities. It is within this context that AMPAC provides educational programs, raises funds, makes direct contributions to candidates for office and makes independent expenditures on behalf of candidates for office."

Other witnesses before the Committee included Senators William Proxmire (D-WI), Thomas F. Eagleton (D-MO), Lloyd Bentsen (D-TX), and Slade Gorton (R-WA) as well as a number of other political experts from the consulting field and academia.

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The AMA has opposed a bill to authorize direct payment to "mental health specialists" under the Medicaid and Medicare programs. According to an AMA statement submitted to the House Ways and Means Subcommittee on Health, H.R. 6092 "would needlessly expand the Medicaid and Medicare programs while failing to assure the maintenance of adequate health care coverage for program beneficiaries."

While individuals trained as "mental health specialists" may be able to perform psychoanalytic functions, these non-MDs lack the expertise to identify or treat a mental health problem that is caused by a medical condition, the AMA told the subcommittee.

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MINUTES OF THE COUNCIL
January 16, 1983

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, January 16, 1983, in the Camelot Hotel, Little Rock. Council members present were Burge, Henry, Crow, Shuffield, Smith, Kolb, Wallick, Lawson, Osborne, J. Bell, Lytle, Hestir, P. Bell, Langston, Sanders, Warren, Joyce, Armstrong, Bracken, Clardy, Jones, Jouett, Morgan, Logan, Purdy, Pearson, Wilkins, Lilly, Chudy, Phillips, Saltzman, Verser, Townsend, P. Kolb, and Kutait. Others present were Milton Deneke, James Weber, Richard Martin, Bascom Raney, Charles Rodgers, George Mitchell, Bob Benafield, Mr. Dan Woods, Ramona Taylor, Mr. Mitchell, Mr. LaMastus, Miss Richmond and C. C. Long.

The Council transacted business as follows:

1. Heard Mr. Dan Woods of Timex Corporation discuss a proposed Medicine-Business Coalition on health care cost containment. He reported that industry representatives would be designated to serve with Society representatives to explore the feasibility of establishing a coalition to work through interaction to deal with problems of health care costs.
2. Upon motion of Warren, the Council voted to request that Chairman of the Council and the President of the Society appoint a committee to study an impaired physician program and to report back to the Council.
3. Approved minutes of the Executive Committee for actions reported on December 1, December 14, and December 28.
4. Joe Verser, secretary of the State Medical Board, advised the Council that legislation would be introduced in the current session of the Legislature to add one senior citizen to all boards of the State. Upon motion of Wilkins, the Council voted to oppose in principle any proposal to give representation to any class of people on State boards and commissions.
5. The Council accepted the nomination of the

district councilors and appointed Kelsy Caplinger of Little Rock to the eighth councilor district professional relations committee. Upon motion of Warren, the Chairman of the Council was authorized to designate the chairman of the district committee and the State committee for professional relations.

6. Upon motion of Lilly, the Council appointed Amail Chudy to the Board of Directors of the Medical Education Foundation for Arkansas to fill the unexpired term of Robert Watson. The Council adopted a resolution commending Dr. Watson for his MEFFA leadership and expressing the Society's appreciation.

7. Chairman Burge announced that the term of Rhys Williams as a member of the Budget Committee had expired and F. E. Joyce had been selected for appointment to the committee. Dr. Joyce was elected. Chairman Burge designated John Hestir chairman of the Budget Committee for the ensuing year.

8. Accepted a report from an ad hoc committee headed by Lee Parker to study establishment of a resident physician section at the State level. It was generally agreed that the Long Range Planning Committee would consider methods for getting interns and residents involved in the Medical Society.

9. Upon motion of Lilly, the Council voted to contribute an additional $500 annually to the Auxiliary for two additional auxilians to attend national leadership training sessions.

10. James M. Kolb, chairman of the Position Papers Committee, recommended that the Society adopt the statement of the American Medical Association Judicial Council on execution by injection until such time as a position paper on the subject could be drafted. The statements approved by the AMA were:

 (1) An individual's opinion on capital punishment is the personal, moral decision of the individual.

 (2) A physician, as a member of a profession dedicated to preserving life when there is hope of doing so, should not be a participant in a legally authorized execution.

 (3) A physician may make a determination or certification of death as currently provided by law in any situation.

 Upon motion of Wilkins, the Council voted to adopt the AMA statements and request that a position paper be developed by the committee.

 Upon motion of Wallick, the Council approved the position paper on "Freedom of Choice" as drafted by the committee.

The Council went into executive session for consideration of a report from the Board of Trustees of the Pension Plan. Secretary Shuffield recorded the following actions of the Council executive session:

1. Dr. Townsend presented method of closing out the old plan. Miss Richmond and Miss Thompson had been discriminated against in the plan settlement. The Board recommended that Miss Richmond and Miss Thompson be given full benefits. Upon motion of Wilkins and Jones, the Council approved the action and recommendation of the Board of Trustees of the Pension Plan.
2. There was discussion of the old contract pertaining to Miss Richmond. The Board recommendation in the form of a proposed agreement is attached. The Council voted that members of the Council be furnished the agreement, along with information pertaining to this recommendation (to come from Mr. Mitchell).

The Council then reconvened in regular session and took the following actions:

1. Voted to make the Medical Auxiliary president and/or committee chairman ex-officio members of Society committees, as follows:
 (A) Society Public Relations Committee: Auxiliary President, Auxiliary Public Relations Chairman
 (B) Society Committee on Legislation: Auxiliary Legislative Chairman
 (C) Society Annual Session Committee: Auxiliary Convention Chairman

 Motion for approval was by Warren.
2. Upon motion of Jouett, voted to authorize expenditures of approximately $1,200 for a reception by President Morriss Henry.

APPROVED: John P. Burge, M.D.
Chairman of the Council

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

THE GENERAL PRACTICE OF ANESTHESIOLOGY

Richard Clark, M.D., Course Director. *April 29-May 1, 8:30 a.m.-11:45 a.m.*, Red Apple Inn (Eden Isle), Heber Springs. Sponsored by UAMS. Five and one-half hours Category I credit. Registration fee: No fee for Arkansas Society of Anesthesiologists members, $40 for non-members, $20 for C.R.N.A.'s.

CALCIUM ANTAGONIST

Presented by Allen Paulk, M. D., *May 3, 12:00 noon*, Ouachita Memorial Hospital, Hot Springs. Sponsored by St. Joseph's Regional Health Center. One hour Category I credit.

1983 PEDIATRIC UPDATE SEMINAR

May 13-15, Fairfield Bay. Fifteen hours Category I credit. Sponsored by Arkansas Children's Hospital. No other information available.

BREAST CARCINOMA UPDATE

Presented by Frank Ludwig, M.D., *May 16, 7:00 p.m.*, Private Dining Room, Memorial Hospital, North Little Rock. One hour Category I credit.

RADIONUCLIDE EVALUATION OF RENAL DISEASE

Presented by Anton J. Bueschen, M.D., Department of Surgery, Division of Urology, University of Alabama, Birmingham, *May 17, 7:00 p.m.*, Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit. No registration fee.

CADUCEUS CLUB SCIENTIFIC PROGRAM

Jack Blackshear, M.D., Course Director. *June 18, 9:00 a.m. to 12:00 noon*, UAMS Education II Building, Room G/141 A & B. Two hours Category I credit.

COLON CANCER UPDATE

Presented by Steven Clift, M.D. *June 20, 7:00 p.m.*, Private Dining Room, Memorial Hospital, North Little Rock. One hour Category I credit.

ABDOMINAL SURGERY IN ADULTS — STATE OF THE ART

Presented by Claude E. Welch, M.D., F.A.C.S., Department of Surgery, Massachusetts General Hospital, Boston. *June 21, 7:00 p.m.*, Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit.

FAMILY PRACTICE INTENSIVE REVIEW

Presented by Ben N. Saltzman, M.D. *June 24-26*, State Health Department Auditorium, Little Rock. Sponsored by UAMS.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pap Smear-Colposcopy Clinic, fourth Tuesday, 12:00 noon to 1:00 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, second and fourth Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and fourth Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, second and third Friday, 12:30 p.m. to 1:30 p.m., Union Medical Center.

FAYETTEVILLE — AHEC-Northwest

Medicine Teaching Conference, each Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, May: Infectious Diseases, Robert Abernathy, M.D.; June: Endocrinology, Richard Jordan, M.D.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.

Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Methodist Hospital of Jonesboro Cafeteria.

Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.

OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.

Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.

Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, Burn Conference Room.

Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.

Primary Care Seminar, each Wednesday, 8:15 a.m., Physicians' Conference Room.

Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.

Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.

Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category I credit. (Pre-registration with Department of Medical Education required, phone 227-2672.)

Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.

Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.

General Internal Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.

Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1. (When there are four Wednesdays in the month, conference will be on fourth Wednesday and there will only be one Case of the Month Conference.)

Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.

Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1.

Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.

Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.

Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.

Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., Radiology Classroom S1025.

Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.

Neuropathology Conference, third Tuesday, 5:30 p.m. to 6:30 p.m., Room S1169 Laboratory.

Nephrology Conference, third Wednesday, 7:30 a.m. to 8:30 a.m., Room E159.

Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.

Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing.

Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.

Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.

Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA — AHEC-Southwest

AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.

AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.

AHEC Regional Nephrology Conference, last Wednesday, 7:30 a.m., St. Michael Hospital.





PERSONAL AND NEWS ITEMS

DR. BOELLNER ELECTED

Dr. Samuel W. Boellner of Little Rock is chief of staff at Baptist Medical Center. Dr. W. Payton Kolb served as chief during 1982. Other officers are: Dr. James R. Rasch, vice chief; Dr. Paul N. Means, anesthesia; Dr. K. W. Cosgrove, EENT; Dr. C. E. Ballard, family practice; Dr. R. Barry Sorrells, orthopaedic surgery; Dr. B. Richard Johnson, pathology; Dr. John W. Lane, radiology; Dr. Robert D. Dickins, surgery; Dr. Arthur E. Squire, medicine; and Dr. James D. Studdard, obstetrics-gynecology.

DR. GORDON HONORED

Dr. Vida Gordon of Little Rock was one of 29 physicians to receive an Award of Merit from the American College of Allergist. Dr. Gordon was honored for her outstanding performance in a medical specialty.

DR. McKIEVER MOVES

Dr. Randy McKiever, formerly of Monticello, has joined the emergency room staff at DeQueen General Hospital.

DR. BURMEISTER LOCATES

Dr. Edward Burmeister has begun practice at the Wilmot Medical Center. Dr. Burmeister, a native of Chile, will practice General Medicine.

DR. HALLER IN VAN BUREN

Dr. Jeffrey Haller, a specialist in Internal Medicine, has joined Dr. Henry Edwards in Van Buren.

DR. HOFFMAN

Dr. Carl E. Hoffman, an ophthalmologist, has opened an office in Suite 5 at 1 Halsted Circle in Rogers.

DR. SCHWARTZ LOCATES

Dr. Frank R. Schwartz, an Internist, has opened an office at 1718 Lindauer in Forrest City.

DR. FUTRELL HONORED

Dr. Byron Futrell of Rector was presented a plaque and certificate of appreciation by that area's National Guard for his 27 years of free services to the area guardsmen.

SEMINAR PRESENTED

Hot Springs physicians participated in a local seminar on "The Practical Management of Rheumatic Disorders." Dr. Fred Robertson was co-director; Drs. Dale Kincheloe, Donald G. Leonard, Robert Kleinhenz and Luis Munos served as faculty for the course.

DR. ENNS ELECTED

Dr. Wayne Enns of Paris has been elected chief of staff at North Logan Memorial Hospital.

DR. JOYCE SPEAKS

Dr. F. E. Joyce of Texarkana was the speaker for a recent meeting of the DeQueen Lions Club. He presented slides depicting "What the Heart Looks Like to a Pathologist."

DR. KOHLER ELECTED

Dr. Peter O. Kohler of Little Rock has been elected president-elect of the Southern Society for Clinical Investigation.

DR. FISER PRESIDENT

Dr. Robert Fiser of Little Rock is president of the Southern Society for Pediatric Research.

DR. SMITH CERTIFIED

Dr. John Smith of Ozark has been certified by the American Board of Surgery.

DR. LAULE SPEAKS

Dr. Alice Laule of Harrison spoke to the Diabetic Support Group on eye problems associated with diabetes.

DR. KATZ LOCATES

Dr. Peter Katz, a Family Physician and Surgeon, has opened an office in the Corning Family Practice Clinic building.

DR. SLAVEN ELECTED

Dr. John Slaven of Little Rock is the newly-elected chief of staff at Arkansas Rehabilitation Institute. Other officers are: Dr. Robert D. Nelson as vice chief; Dr. Warren C. Boop, Jr., as secretary; Dr. Nancy F. Rector as chief-elect; Dr. Henry A. Lile representing Radiology and Dr. Joseph P. Ward representing Anesthesiology. Dr. Mark A. Strauss is immediate past chief.

DR. DEVI SPEAKS

Dr. T. S. Devi of Pine Bluff spoke at a recent meeting of Beta Chi Chapter of Epsilon Sigma Alpha International. She discussed her reasons for becoming a physician and coming to the United States from India.

DOCTORS DONATE EQUIPMENT

Drs. Carl and Sue Chambers of Harrison donated to the Boone County Hospital Emergency Room a Mobile Treatment Unit which contains

instruments and equipment for use in the treatment of ear, nose and throat emergencies.

DRS. CHUDY AND WEBER APPOINTED

Dr. Amail Chudy of North Little Rock has been appointed to the newly-created Committee on Drugs and Devices of the American Academy of Family Physicians.

Dr. James R. Weber of Jacksonville has been appointed to the Academy's Committee on Scientific Programs.

DR. GOSSER ELECTED

Dr. Bob Gosser of Little Rock has been elected chief of staff of the Memorial Hospital Medical Staff Executive Committee for 1983. Dr. Melvin Belknap of North Little Rock is immediate past chief.

Other officers are: Dr. Jack Fendley, vice chief, and Dr. Peyton E. Rice, secretary. Section chairmen are: Dr. Kimber M. Stout, Medicine; Dr. Charles R. Fielder, Surgery; Dr. Joe Lee Buford, Family Practice; Dr. Douglas E. Young, Pathology; Dr. W. Clyde Glover, Radiology; Dr. C. Dale Fuller, Quality Assurance; and Dr. T. J. Smith, Patient Care.

DR. ROBINSON RETIRES

After 26 years of active practice, Dr. G. Allen Robinson of Harrison, Arkansas, retired March 1, 1983. He is the last surviving member of the Medical Class of 1919 at Vanderbilt. Dr. Robinson will pursue his hobby of golf and continue his interest in the Robinson Medical Museum and Heritage Center, located at his Valley Springs farm, three miles from Harrison.



NEW MEMBERS

DR. PETER A. MacKERCHER

Dr. MacKercher, a new member of the Baxter County Medical Society, was born in Ponca City, Oklahoma.

He received a B.A. degree in 1968 from Westminster College at Fulton, Missouri. In 1972, Dr. MacKercher was graduated from the University of Missouri School of Medicine in Columbia. His internship and residency training in Internal Medicine and Gastroenterology were with the University of Missouri. He is board certified in Internal Medicine.

Dr. MacKercher served with the United States Navy from 1977 to 1979. He moved to Mountain Home in 1980.

Dr. MacKercher specializes in Gastroenterology and Internal Medicine. His office is in the Pigeon Creek Medical Center on Highway 201 North in Mountain Home.

DR. DANNY T. BERRY

Dr. Berry is a new member of the Chicot County Medical Society. He was born in Oxnard, California.

In 1977, Dr. Berry received a Bachelor of Arts degree in Physics from the University of Arkansas at Fayetteville. He is a 1981 graduate of the University of Arkansas College of Medicine. His residency was with the Area Health Education Center in Jonesboro.

Dr. Berry specializes in General Practice. He is associated with the Lake Village Clinic in Lake Village.

DR. C. L. KEMP

Dr. Kemp, a native of Dermott, has joined the Greene-Clay County Medical Society.

He is a 1975 graduate of the Arkansas State University and a 1978 graduate of the University of Arkansas College of Medicine. Dr. Kemp served his internship and residency at John Peter Smith Hospital in Fort Worth, Texas. He is board certified in Family Practice. Dr. Kemp has practiced in Paragould since 1981.

Dr. Kemp specializes in Family Practice. He is associated with Drs. Asa Crow, Roger Cagle and Mack Shotts at #1 Medical Drive in Paragould.

DR. MUFIZ A. CHAUHAN

Dr. Chauhan, a new member of the Jackson County Medical Society, was born in Memphis, Tennessee.

He is a 1967 graduate of Government College in Pakistan. Dr. Chauhan was graduated from King Edward Medical College in Lahore, West Pakistan, in 1973. After an internship with Bridgeport Hospital, he received his residency training at the University of Arkansas College of Medicine.

Dr. Chauhan has practiced in Newport since 1981. He is board certified in Radiology.

Dr. Chauhan specializes in Radiology and has his office in the Harris Hospital at 1205 McLain in Newport.

DR. BRYAN L. BURKE, JR.

Dr. Burke is a new member of the Jefferson County Medical Society. A native of Warren, he now practices in Pine Bluff.

Dr. Burke received his pre-med education at Baylor University in Waco, Texas. He was graduated from the University of Arkansas College of Medicine in 1979. Dr. Burke served his internship and residency at the University Hospital and Arkansas Children's Hospital.

He specializes in Pediatrics at 1420 West 43rd.

DR. ROBERT D. QUEVILLON

Dr. Quevillon has joined the Lawrence County Medical Society.

He was born in Kalamazoo, Michigan. In 1963 he received his B.S. degree from the Western Michigan University in Kalamazoo. He was graduated from Loyola University Stritch School of Medicine in Chicago in 1967. Dr. Quevillon served his internship at Chicago Wesley Memorial Northwestern Medical Center and his residency at the University of Mississippi Medical Center in Jackson. He is a board certified Internist.

Before moving to Walnut Ridge, Dr. Quevillon practiced for eleven years in Benton Harbor, Michigan. While in Michigan, he served as president of the Berrien County Medical Society in 1976 and in 1980 as chief of Medicine at the Mercy Hospital in Benton Harbor and the Memorial Hospital in St. Joseph. From 1978 to 1982, he was a member of Area X PSRO Hospital Review Committee.

Dr. Quevillon specializes in Internal Medicine. His office is at 421 Southwest Third Street in Walnut Ridge.

DR. BILLY K. WADE

Dr. Wade is a general practitioner in Ashdown and a new member of the Little River County Medical Society.

He is a native of Ogden, Arkansas. His pre-medical education was with the United States Air Force Academy at Colorado Springs. He was graduated and commissioned in 1969. He then attended the University of Arkansas College of Medicine and received his medical degree in 1973. His internship and surgery residency were with the United States Air Force Hospital in Biloxi, Mississippi. After training, he served with Air Force Hospitals at Malstrum Air Force Base in Montana and Little Rock Air Force Base. He served in the Air Force until July 1982.

Dr. Wade is associated with the Gillean Clinic at South Fourth and Richmond in Ashdown.

* * * *

The Sebastian County Medical Society has two new members:

DR. ALFRED H. GRIMES

Dr. Grimes was born in Lodi, California. He received a Bachelor of Science degree in 1971 from the California State University in Fresno. From 1973 to 1975, he attended the University of Arkansas at Little Rock. Dr. Grimes was graduated from the University of Arkansas College of Medicine in 1979.

His internship and residency were with the University of Southern California Medical Center at Los Angeles.

Dr. Grimes specializes in Anesthesiology and is associated with Holt Krock Clinic at 1500 Dodson in Fort Smith.

DR. RONALD P. ROBINSON

Dr. Robinson specializes in Internal Medicine and Endocrinology and is board certified in each. He is associated with Cooper Clinic at Waldron Road and Ellsworth in Fort Smith.

Dr. Robinson, a native of Chickasha, Oklahoma, is a 1972 graduate of the University of Oklahoma. He was graduated from the University of Oklahoma College of Medicine in 1976. Dr. Robinson served his intership and residency at Henry Ford Hospital in Detroit, Michigan. From 1979 to 1982, Dr. Robinson was an Endocrinology Fellow with the Vanderbilt University Affiliated Hospitals in Nashville.

* * * *

DR. DAVID E. STEARNS

Dr. Stearns is a new member of the Sevier County Medical Society. He was born in Vinton, Iowa.

Dr. Stearns received his pre-med education at

Iowa State University in Ames. He is a 1966 graduate of the University of Iowa College of Medicine in Iowa City.

After an internship at the Wilmington Medical Center in Wilmington, Delaware, he was on active duty with the United States Navy Reserve from 1967 to 1969. Dr. Stearns was in practice from 1969 to 1976 in Iowa and Illinois.

Dr. Stearns then entered residency training at the St. Francis Medical Center in Peoria, Illinois; while at Peoria, he was a teaching assistant at the University of Illinois School of Medicine. He practiced in Minnesota for two years following the residency training.

Dr. Stearns is board certified in General Surgery and is a candidate of the American College of Surgeons. He specializes in General Surgery; his office is located in the Medical Arts Building in DeQueen.

DR. ROBERT S. BELL

Dr. Bell, a native of Minneapolis, has joined the Union County Medical Society.

In 1972, Dr. Bell received a Bachelor of Science degree from the University of Arizona. He was graduated from the University of Arizona College of Medicine in 1976. After an internship with the Veterans Administration Medical Center in Martinez, California, Dr. Bell had residency training at Vanderbilt University in Nashville, Tennessee.

Dr. Bell specializes in Orthopaedic Surgery. His office is at 619 West Grove in El Dorado.

DR. KEITH HACKLER

Dr. Hackler is a new member of the Washington County Medical Society. He was born in Hobbs, New Mexico.

Dr. Hackler received a Bachelor of Arts degree in Chemistry from Texas Tech University at Lubbock in 1962. He is a 1966 graduate of the University of Texas Southwestern Medical School in Dallas. Dr. Hackler served his internship at Methodist Hospital and the Veterans Administration Medical Center in Dallas. His residency training was with Methodist Hospital in Dallas and the University of Arkansas Medical Center.

Dr. Hackler served in the United States Air Force from 1968 to 1970 at Patrick Air Force Base in Florida. He began practice in Fayetteville in 1973.

Dr. Hackler, who specializes in General Radiology, is certified by the American Board of Radiology and the American Board of Nuclear Medicine. His office is located at 57 Colt Square Drive in Fayetteville.

THINGS TO COME

May 5-8

107th Annual Session Arkansas Medical Society. "Old and New—A Delicate Blend." Hilton Hotel, Fayetteville. For further information, contact Leah Richmond at headquarters office in Fort Smith.

Arkansas Chapter, American College of Surgeons has announced the following meetings for 1983:

Luncheon Meeting in conjunction with Arkansas Medical Society annual meeting, May 6. Hilton Hotel, Fayetteville.

Annual Meeting, June 9-10. Red Apple Inn, Heber Springs.

For further information on the chapter's meetings, contact Dr. Samuel E. Landrum, chapter secretary, 522 South 16th, Fort Smith 72901.

The Southern Medical Association has announced the following schedule for continuing education programs:

Regional Postgraduate Conference, May 6-8. Marriott Resort Griffin Gate, Lexington, Kentucky. $15 per hour for SMA members; $22.50 for non-members. 4-hour and 6-hour courses available.

Medical Malpractice Seminar, June 16-17. Westin Crown Center, Kansas City, Missouri. $220 for SMA members; $275 for non-members.

For further information about any of these programs, contact Ms. Jeanette Stone, Southern Medical Association, Post Office Box 2446, Birmingham, Alabama 35201; phone 205-323-4400.

June 9-10

Basic Colposcopy Workshop. Sponsored by the Division of Gynecologic Oncology, Southwestern Medical School, The University of Texas Health Science Center at Dallas. 14 hours Category I, AMA; 14 Cognates, Formal Learning, American College of Obstetrics-Gynecology. Fee: $350. For further information, contact June Bovill, Division of Continuing Education, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235; phone 214-688-2166.

September 16-17

Comprehensive Care of the Burn Patient. Hyatt Regency Hotel, Kansas City, Missouri. Sponsors are American Burn Association and Saint Elizabeth Community Health Center. 24 hours of Category I AMA through the Lincoln Medical Education Foundation. Registration fee: $225 physicians, $125 residents, $125 nurses and allied professionals. For further information, contact Robert W. Gillespie, M.D., St. Elizabeth Community Health Center, 555 South 70th, Lincoln, Nebraska 68510.

OBITUARY

DR. CHARLES WALLIS

Dr. Wallis of Little Rock died March 13, 1983. He was born October 13, 1890, in Arkadelphia.

Dr. Wallis received his pre-med education at Ouachita College in Arkadelphia. He was graduated from the Jefferson Medical College of Thomas Jefferson University in Philadelphia, Pennsylvania, in 1918.

During World War I, Dr. Wallis served at the now-defunct Contagions Hospital in North Philadelphia where he treated more than 1,500 diphtheria patients. Dr. Wallis trained in Pediatrics at the Children's Emergency Hospital in Kansas City after his military service. He moved to Little Rock in 1934 and joined Dr. Clyde Rogers in the Donaghey Building. Dr. Wallis was the first physician to practice Pediatrics full time in Arkansas. He retired from medical practice in 1968.

Dr. Wallis is survived by his wife, Dollye Holt Wallis, and one daughter.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The patient's electrocardiogram is marred by tremor artifact seen in all leads except Lead III. The tremar artifact is occurring at a rate of about 300/minute and could possibly be confused with atrial tachycardia or atrial flutter. One can see clearly true P-waves in Lead III, followed by normal QRS complexes at a rate of 85/minute. In Lead II, P-waves distorted by the tremor artifact can be well seen. No consistent pattern exists between the artifact and the QRS complexes and the artifact rate of 300/minute and QRS rate of 85/minute are incompatible with either 3:1 or 4:1 conduction, even should one initially mistake the artifact for P-waves and consider atrial tachycardia with block or atrial flutter as the patient's mechanism. Lead III is usually one of the leads in which "flutter" waves can best be seen, sa the absence of the "flutter" waves in III weakens the probability of the "arrhythmia" being atrial flutter. In summary then, the patient has sinus rhythm and extensive tremor artifact. Obviously, of the choices given, one would choose D. The feature editor wishes to thank Dr. Ray H. Hall of Jonesboro, Arkansas, for his generous assistance with this month's ECG.

May, 1983

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Vol. 79 No. 12

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NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to this membership.

SCIENTIFIC ARTICLES

Reversal of Female Sterilization: A Review ... 443
Gary P. Wood, M.D.

Laser Iridectomy and Laser Trabeculoplasty: New Uses of the Argon Laser for Glaucoma ... 445
George T. Schroeder, M.D.

FEATURES

ECG of the Month ... 449
John W. Watson, M.D.

Office Orthopaedics: "The Hand — Infected Flexor Tendon Sheath" ... 450
Kenneth G. Jones, M.D.

Pediatrics: "Diagnostic Testing in Cystic Fibrosis" ... 451
Robert H. Warren, M.D., Brenda Jones, and Reva Heffington

Editorial: "The College of Medicine in 1983: Pride and Concern" ... 455
Thomas Allen Bruce, M.D., Dean, College of Medicine

From Other Years ... 456

Medicine in the News ... 457

Council Minutes ... 462

Resolutions ... 463

Keeping Up ... 464

Things to Come ... 465

Personal and News Items ... 466

New Members ... 467

Obituaries ... 472

Index ... 473

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Reversal of Female Sterilization: A Review

Gary P. Wood, M.D.*

It was predicable that the liberalization of requirements for surgical sterilization which occurred a decade ago, coupled with an increasing divorce rate, would result in an increased demand for restoration of fertility. The development of more refined surgical techniques, especially microsurgery, has made the reversal of female sterilization a reasonably safe procedure which can result in a pregnancy rate which may be as high as 70%.[1]

Since the decisions for surgical sterilization and subsequent reversal have become social rather than medical issues, they are beyond the scope of this paper. It is the purpose of this paper to review relevant preoperative counseling and evaluation and currently available surgical technology.

Preoperative Counseling

There is a body of information which must be available to women contemplating reversal of a previous surgical sterilization procedure. They must be aware that reversal requires a major surgical procedure with approximately two hours operative time, several days of postoperative hospitalization, and several weeks of limited activity following surgery. This is usually in marked contrast to the sterilization procedure which usually involved a "minor" procedure with minimal postoperative recovery. Postoperative morbidity is minimal following sterilization reversal since the candidates are usually young and in good health. In fact, significant medical problems which would increase the risk of surgery are often considered contraindication to reversal surgery. One must also consider any existing medical problems and their interaction with subsequent pregnancies.

The possibility of tubal pregnancy following reversal procedures has been exaggerated. While it is true that about 10% of pregnancies occurring after macrosurgical reversal procedures are tubal in location,[2] the incidence after microsurgical procedures is probably less than 1%.[3] This low tubal pregnancy rate after microsurgical reversal is probably a result of the more precise mucosal approximation and reduced tissue trauma which are possible with microsurgical techniques.

The pregnancy rate following microsurgical reversal procedures is approaching 70%[1] under optimum conditions, assuming that other related factors (ovulation, sperm, etc.) are functioning adequately. The success of the procedure is dependent, in some part, on the type of sterilization procedure performed. The best results are obtained with the classical Pomeroy procedure and laparoscopic sterilization using clips or silactic bands. Procedures involving electrocoagulation of the tube have a lower success rate and the critical determinant seems to be the amount of tube that was removed or destroyed. It has been shown that, in rabbits[4] and humans[1,5] as the length of repaired tube is reduced, the pregnancy rate is diminished and the interval from reversal to conception is increased.

The patient considering sterilization reversal must also be aware of a number of considerations which are not directly related to the procedure. If previous pregnancies have been delivered by Cesarean section, it is likely that subsequent pregnancies will be delivered by the same route. She will be subject to spontaneous abortion, toxemias and other problems normally associated with pregnancy. She must also be counseled that, if she becomes pregnant after 35 years of age, the fetus will be at increased risk for Down's syndrome and she will have the options of amniocentesis and possible therapeutic abortion to consider.

Preoperative Evaluation

Reversal of female sterilization is an elective, major surgical procedure and all efforts must be made to minimize risks. A thorough history and physical examination must be performed and any medical problems which are relevant must be evaluated and regulated.

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It is essential to know what type of sterilization procedure was performed and the operative and pathology reports from the sterilization procedure are helpful in estimating the amount and condition of the remaining tube. (The pathology report may indicate the length of tubal section removed as well as the anatomical location of the sterilization procedure.) Hysterosalpingography is of value only in evaluation of the tube after a fimbriectomy procedure. If the fimbrial apparatus is removed, tubal patency can be restored only if a portion of the ampullary segment remains. (Needless to say, the pregnancy rate is much lower following reversal in this situation.) We do laparoscopy if the sterilization procedure involved extensive unipolar electrocauterization of the tube since this may result in destruction of such a large portion of tube that restoration of fertility may not be possible.

Needless to say, preoperative evaluation must also include some appraisal of the fertility of the male partner. A semen examination is the easiest way to accomplish this. A low "sperm count" is not a contraindication to sterilization reversal but it must be understood beforehand that the chances for conception may be reduced. It must also be established that ovulation is possible.

Surgical Considerations

There is little question that microsurgical technology has dramatically improved the outcome in sterilization reversal procedures. This improvement lies not only in an increased intrauterine pregnancy rate[1,6] but also in a reduced tubal pregnancy rate.[2,3] These would seem to be logical consequences of the less traumatic tissue handling and more anatomically precise approximation of tissues possible using these techniques.

The avoidance of postoperative adhesions has long been a goal of infertility surgery and numerous regimens have been developed to work toward this end. The most popular of these (at the present time) involve either the systemic use of a dexamethasone-promethazine-antibiotic combination or the use of intraperitoneal dextran.[7]

The practice of leaving splints in the tubes during the postoperative period has been largely abandoned since it has been shown that this can result in significant permanent damage to the tubal epithilium.[8,9]

Recently, the laser has been promoted by a few as a revolutionary breakthrough in infertility surgery. While it may have the potential to be of assistance in this type surgery, at the present time it must be regarded as a rather cumbersome and expensive cautery unit. There are no objective data available at this time to indicate any significant benefit from the use of the laser in infertility surgery.

Summary

The last decade has seen a marked increase in the demand for reversal of female sterilization and developing microsurgical technology has made it a reasonably safe and effective procedure. Women contemplating this surgery must be counseled beforehand with regard to what to expect from the surgery. It appears that this procedure will be frequently requested as long as surgical sterilization is a social rather than a medical issue and is freely available to young women of low parity.

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Laser Iridectomy and Laser Trabeculoplasty: New Uses of the Argon Laser for Glaucoma

George T. Schroeder, M.D.*

SUMMARY

Laser photocoagulation has been used extensively in ophthalmology and other fields of medicine since the instruments first became available twenty years ago. In ophthalmology lasers have been until recently used almost exclusively by retinal subspecialists for treating diseases of the retina and choroid.

In the past few years it has become apparent that laser therapy offers a promising new method for the general ophthalmic surgeon to treat both narrow angle glaucoma, and, even more recently, open angle glaucoma. The laser surgical procedures for both are brief out-patient procedures that require only topical anesthesia; each has a remarkably high effectiveness and even more importantly a remarkably low complication rate. In addition to not requiring a hospital stay, cost-effectiveness is further enhanced by the patient's being able to resume full activities, including employment, the next day.

Photocoagulation was introduced in ophthalmology in 1949 when Meyer Schwickerath[1] first demonstrated an instrument using carefully focused white light from an electrical arc; it represented a significant improvement in the treatment of fundus conditions including diabetic retinopathy and allowed sealing of retinal tears if located not too far anterior in the retina.

When lasers were conceived in 1958 and first became available in 1961 they soon found application in ophthalmology, used chiefly by the developing subspecialty of retinal surgery. These surgeons recognized that the relatively monochromatic nature of laser light, contrasted to the wide spectrum of the xenon arc photocoagulator, would allow selection of the appropriate wave length of light to allow maximum absorption of energy at the desired tissue site, and minimum absorption at areas where thermal tissue change needed to be avoided.

Ruby crystal lasers were introduced first and used successfully, but the red light (wavelength 6943 angstroms) is not well absorbed by hemoglobin.[2] Argon gas lasers (4880 and 6148 angstroms) were introduced in 1969 and these green wavelengths offered the advantage of good absorption by hemoglobin, therefore allowing direct cauterization of blood vessels.[3]

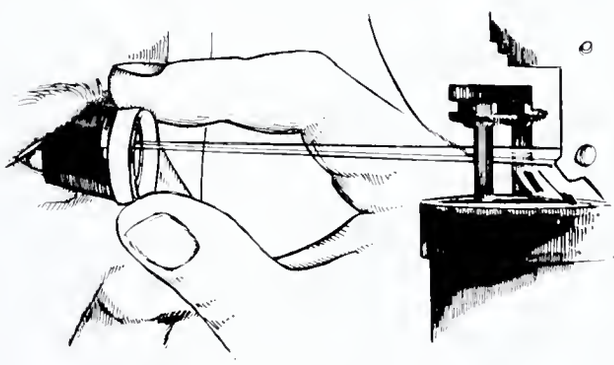


FIGURE 1
Argon laser being delivered to eye.

NARROW ANGLE GLAUCOMA

Ever since the pathogenesis of narrow angle glaucoma was elucidated, the standard treatment, nearly always curative, has been a surgical peripheral iridectomy. This procedure bypasses the relative pupillary block which is the underlying cause for the increased pressure in the posterior chamber which results in forward bowing (bombe) of the peripheral iris, causing a physical obstruction of the filtering trabecular meshwork. (See Figure 2) Patients with this condition usually have a sudden and dramatic onset of increased

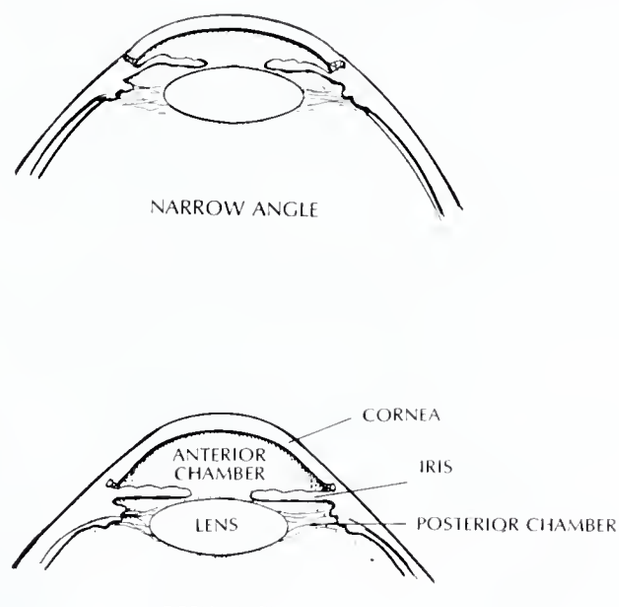


FIGURE 2

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intraocular pressure, causing the classical symptoms of deep pain with foggy vision (colored haloes due to corneal edema), associated with redness and a mid-dilated, non-reactive pupil.

Surgical peripheral iridectomy is among the safest of intraocular surgical procedures, but it does require hospitalization and its complications, which are not rare, include cataract formation, intraocular hemorrhage, and endophthalmitis, as well as untoward anesthetic reactions. An equally efficacious hole in the iris can be successfully produced by laser photocoagulation in ninety-five percent or more of patients.[4,5,6] Laser iridectomy is a brief outpatient procedure requiring only topical anesthesia and is much safer for the eye, for the patient in general, and as a bonus is cost effective. The total cost for a laser iridectomy ought to be thirty to fifty percent of that for a surgical peripheral iridectomy; in addition, full employment may generally be resumed the next day, compared to a week or more off work for the formal surgical procedure. (See Figure 3)

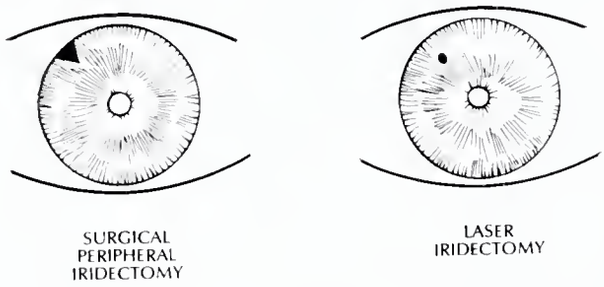


FIGURE 3

In many large medical centers, the surgical iridectomy has become the uncommon and exceptional procedure, compared to the laser technique which is now preferentially used.[7] The surgical iridectomy is still indicated in significantly inflamed eyes, or in angle closure secondary to inflammatory conditions, but the laser procedure ought to be chosen in other cases of angle closure glaucoma, and in the fellow eye of patients who have had acute angle closure in one eye.

OPEN ANGLE GLAUCOMA

Treatment of primary open angle glaucoma has been improved by earlier detection and by new topical medications in the ophthalmologist's armamentarium, but there remains a sizeable number of patients for whom even maximum medical treatment is insufficient for lowering the intraocular pressure to safe levels, or for whom the required medications cause intolerable local or systemic side effects. In addition, there is the continuing problem of compliance with an inconvenient and not inexpensive treatment regime for a disease that is until its final stages essentially asymptomatic.

The underlying pathogenesis of primary open angle glaucoma is a sub-microscopic relative obstruction of aqueous outflow from the anterior chamber through the filtering meshwork of the trabecular spaces (see Figure 4) through which the fluid enters Schlemm's Canal, a ring-shaped collecting channel which communicates directly with the conjunctival veins. Most standard sur-

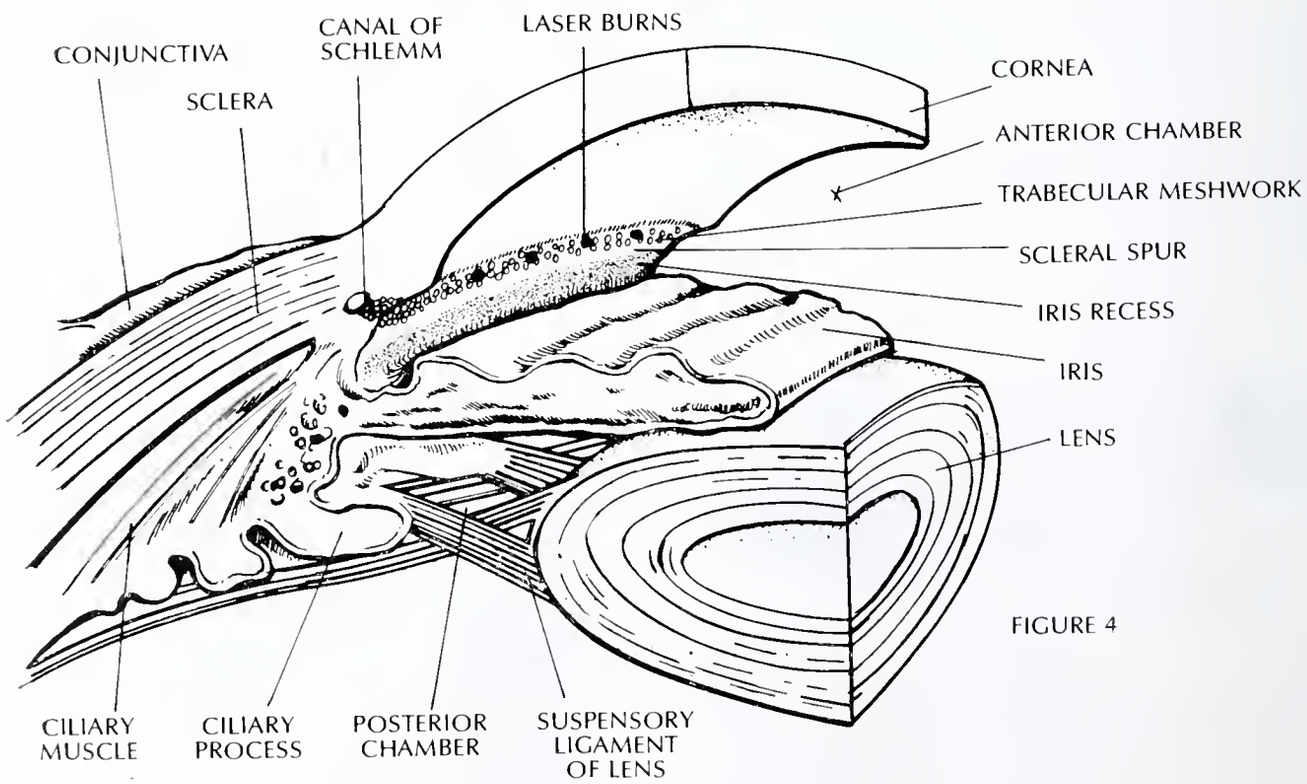


FIGURE 4

gical procedures for open angle glaucoma have in common the production of a new outflow channel for aqueous to exit the anterior chamber, creating a fistula into a filtering subconjunctival bleb, from which aqueous can be resorbed into the conjunctival veins, and/or in part diffuse across the bleb wall into the tear film. Fistulas have been created by means of trephines, punch sclerectomies, or thermal cautery to limbal incisions.[8] Various setons (gold, horsehair) and more recently, silicone mini-valves, have been tried in order to make the fistula more permanent. Inclusion of a leaf of iris (iridencleisis) tends to keep the fistula open well but has a higher incidence of sympathetic ophthalmia which may cause loss of the fellow eye. A significant improvement was Cairn's trabeculectomy, which was supposed to allow access of aqueous to the cut ends of Schlemm's Canal, but which is now felt to work as a standard filtering operation that has the advantage of moving the bleb further posterior and which has a lower incidence of the post-operative complications which all filtering procedures share: flat anterior chamber, hypotony, cystic blebs (late endopthalmitis or rupture a possibility), and cataract formation.

LASER TRABECULOPLASTY

Some success has been had by dissecting down to Schlemm's Canal from the scleral side, threading a fine wire into it, then cutting into the anterior chamber through the trabecular meshwork (trabeculotomy ab externo).[9] It seemed logical to try to burn a hole through the trabeculum into Schlemm's Canal with laser energy. Krasnov tried this with a Q-switched (quick pulsed energy delivery) ruby laser[10] but achieved only temporary (one to twelve weeks) lowering of intraocular pressure. Similar experiences were reported by other investigators. (Teichman,[11] Wortham and Wickham,[12] Ticho and Zauberman[13]) Apparently a hole in the trabecular meshwork can be punched into Schlemm's Canal, but it is rather soon closed by scar formation.

In 1976 Jim Wise began studies on a new approach that effectively lowers intraocular pressure in most patients, does have a lasting effect, is remarkably safe, but does *not* work by punching a hole in the trabecular meshwork.[14] (See Figure 4) The technique involves placing carefully focused argon laser burns of fifty microns diameter in the filtering trabecular meshwork just anterior to the scleral spur. Power settings of 800-1500 milliwatts and duration of 0.1 second are used. The microburns are placed using a slit-lamp laser delivery system and a mirrored gonioscopic contact lens, treating three hundred and sixty degrees of the anterior chamber angle. The procedure requires about fifteen minutes, is an outpatient procedure, and requires only topical anesthesia.

The characteristic result of laser trabeculoplasty is a large reduction in medication requirements. The average pressure drop was 12.5 mm hg, even though the eyes post laser were on significantly less intensive medical therapy. If the procedure is viewed as a last thing to do before filtering surgery, it is eminently effective; fewer than five percent of eyes post laser required surgery (six month follow-up). Studies to date indicate that the result at three months post laser treatment predicts the future results for at least three years.[15,16]

MECHANISM OF ACTION

The proposed mechanism of action of laser trabeculoplasty postulates that with age the trabecular meshwork sags and collapses, causing relative closure of the intratrabecular spaces and possibly of Schlemm's Canal as well. The laser microscars tighten up the sagging and collapsed trabecular meshwork analagous to a face-lift, and keep it tightened for years. The hypothesis that it is tightening of microscars that causes the procedure to work explains why onset of pressure lowering usually follows the treatment by one to four weeks.

The procedure works best on phakic eyes with primary open angle glaucoma, a disease of older adults. The postulated mechanism of action is consistent with its relatively poorer effectiveness in secondary glaucomas due to inflammation or pigmentary debris obstructing the outflow through the trabecular meshwork. Laser trabeculoplasty is less effective in aphakic (after cataract extraction) eyes, although eyes which have had successful laser procedures and which subsequently undergo cataract extraction do not have their control compromised.[17]

Since the laser effect frequently takes three to four weeks to begin working, the patient must understand this. A significant number of eyes will indeed have a two or three week increase in pressure and then may end up with a good hypotensive final result. In order to minimize the incidence of the transient post-treatment pressure

increases, the number of laser burns applied has been decreased from the hundred originally recommended to be applied at a single treatment session to the filtering trabecular meshwork, and the protocol has been changed so that sixty spots are spaced around the three hundred and sixty degree circumference of the angle at the first treatment; if the desired pressure lowering is not present two weeks later, another forty spots are applied then in a second stage (without an additional surgical fee).[18]

RESULTS

Complications of laser trabeculoplasty have been rare. About five percent of eyes will have an ooze of blood from a laser impact site, which is generally easy to stop with a 200 micron low power laser cautery. Minimal iritis and small epithelial corneal white spots are often seen and quickly clear. Unlike the standard surgical filtering procedures, there have been no infections, cataracts, flat anterior chambers, hyphemas, sympathetic ophthalmia, malignant glaucoma, or macular edema. In the occasional patient in whom the laser trabeculoplasty fails, the eye is essentially untouched, and any of the standard surgical procedures can then be done.[19,20]

The percentage of patients whose intraocular pressure is controlled after laser trabeculoplasty has been approximately equal to that with conventional surgery in caucasians, and even better than traditional surgery in black patients, who generally have a lower success rate with standard surgical procedures for glaucoma, and who are felt to have poorer success with medical management for open angle glaucoma.

As with laser iridectomy for narrow angle glaucoma, the procedure is effective, safer for the eye and for the patient than standard surgical procedures, and in addition is cost effective both in total cost to the patient and in avoiding the week or two off work which filtering glaucoma procedures generally require.

The place for the promising new procedure of laser trabeculoplasty is not yet determined. Some enthusiastic proponents predict that it will largely supplant topical therapy in the majority of open angle glaucoma patients.[21] It certainly should be considered before standard filtering surgery for most patients, and because of its significant advantages of safety and effectiveness, should probably be used relatively early in the patient who has significant difficulty using conventional medical therapy.

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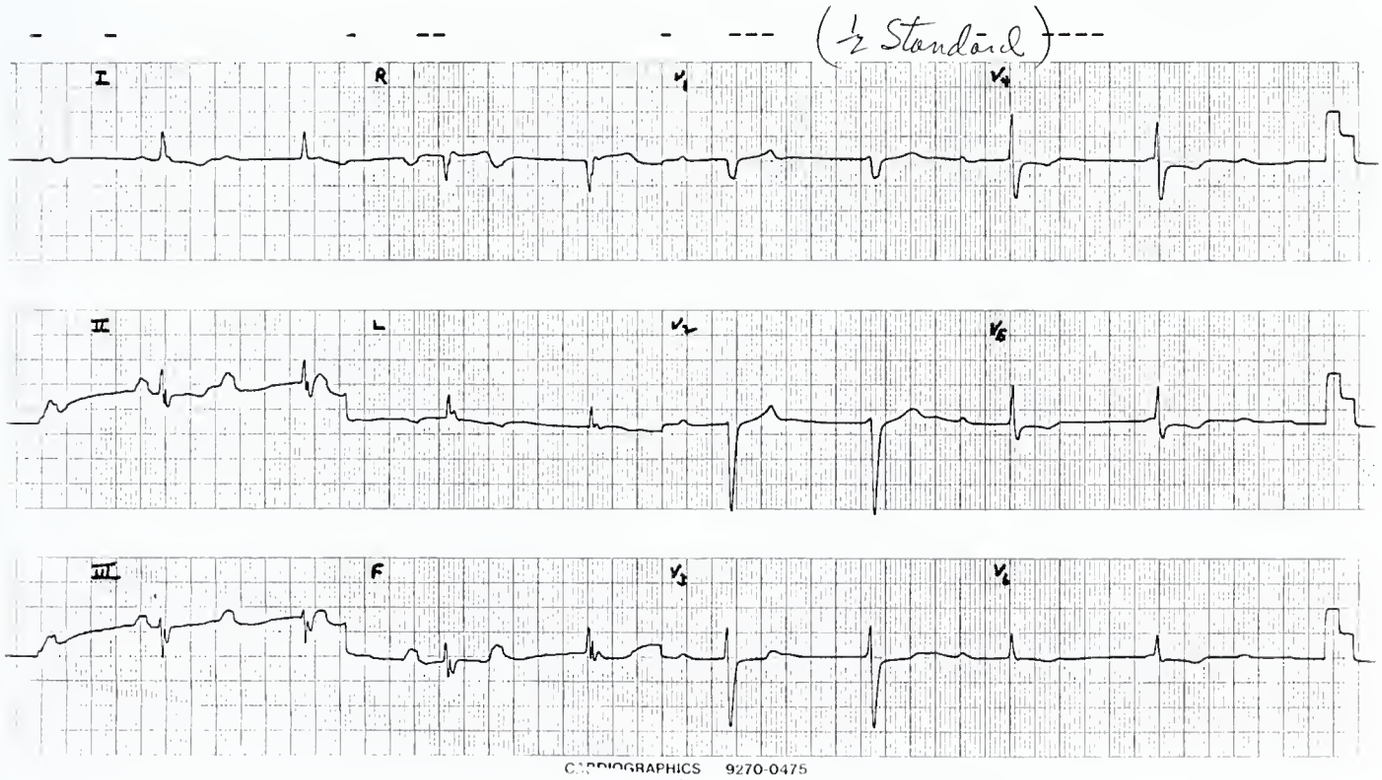
ELECTROCARDIOGRAM OF THE MONTH

The Department of Cardiology, University of Arkansas College of Medicine

(See Answer on Page 472)

HISTORY: J. K. is a 36-year-old woman presenting because of syncope, present since childhood. She has known of a slow pulse rate for many years. Using this sparse history, plus her electrocardiogram, respond to the following statements concerning her physical examination, as being either true or false:

1. Her pulse pressure is normal.
2. S_1 is variable.
3. No a-waves are seen in her neck veins.
4. She has an S_4 gallop.
5. The apical impulse is abnormal.



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Office Orthopaedics

The Hand — Infected Flexor Tendon Sheath

Kenneth G. Jones, M.D.*

Since the introduction of antibiotics into medical practice in the early 1940's, surgeons have encountered a decreasing number of infections of the hand. It is somewhat disquieting to reflect that, as recently as a half century ago, hand infections constituted one of the greatest threats to the ability of the working man to continue to earn his living. The then ever-present threat of wounding — infection — permanent disability — inability to work and the unavailability of workman's compensation, prompted Kanavel,[1] one of the first surgeons primarily concerned with the hand of man, to observe: "The hand of the working man is his most valuable asset. Without it, life becomes a burden." Today there are many busy practitioners who have never seen, even in their training, a grossly infected hand. It is well that they have not! Real progress has been made.

Even so, an infected flexor tendon sheath of the hand, when seen late by the surgeon, can still maim. Perhaps the primary reason for a delay in diagnosis is because the infection does not always reach the tendon sheath through direct wounding. It may be introduced into the tendon sheath by way of the lymphatics following minimal wounding of the pulp away from the then symptomatic area. In that event, because the tendon sheath is closed, pain and tenderness can be marked throughout its distribution when it has become distended with a cloudy fluid that may soon become purulent. If the process is untreated, local symptoms in the initially involved digit can regress even though the patient presents the picture of a progressive systemic toxemia. This is because an infected digital flexor sheath, when overly distended or eroded, can rupture into a palmar space or into the forearm and then enter a contiguous tendon sheath to continue its spread. Fortunately, an early diagnosis, incision and drainage through a mid-lateral approach, local supportive treatment, and the administration of effective antibiotics in adequate amounts should preclude this catastrophic sequence. To assist in our recognition of this potentially devastating problem we can do no better than return to Dr. Kanavel.[2] In his classic treatise, "Infections of the Hand," he directed attention to four cardinal findings present in flexor tendon sheath infections. They are:

1. Symmetrical swelling of the finger.
2. Excessive tenderness over the course of, and limited to, the flexor tendon sheath.
3. A semi-flexed position of the finger.
4. Pain on extension of the finger.

A fifth finding, limitation of active flexion, seen in many conditions which affect the fingers, may also be observed.

These findings, supporting the surgeon's awareness of the problem, should permit a correct diagnosis sufficiently early to prevent any extensive permanent disability.

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Pediatrics

Diagnostic Testing in Cystic Fibrosis

Robert H. Warren, M.D.,* Brenda Jones,** and Reva Heffington***

Cystic fibrosis is a generalized systemic hereditary disorder of children, adolescents, and young adults. In cystic fibrosis, there is a dysfunction in the body's exocrine gland system, especially the mucus producing glands. As a result of the disease, the mucus is tenacious and sticky, causing blockage of glandular ducts, particularly those of the respiratory and digestive system.

Sweat gland function is abnormal in cystic fibrosis. As a result, sweat electrolyte levels are abnormally high. The abnormally elevated sweat electrolyte levels form the basis for making a diagnosis of cystic fibrosis.

Cystic fibrosis is one of the most common genetic disorders. There are an estimated ten million carriers in the United States alone. It is transmitted as a mendelian autosomal recessive trait. Whenever two parents who carry the gene for cystic fibrosis produce a child, there is a 25% chance that the baby will be born with cystic fibrosis; a 50% chance that the baby will be a carrier but will not have cystic fibrosis; and a 25% chance that the gene will not be passed on.

It is estimated that cystic fibrosis occurs in about 1 in 1800 live births, resulting in 1,000 to 2,000 new cases a year in the U. S. Estimates of prevalence range up to 33,000. The total number of recognized cases is increasing as more children are diagnosed correctly, are treated earlier, and consequently, are living longer.

Cystic fibrosis is largely a disease of persons of Caucasian descent. There is a small but significant number of blacks and, to a lesser degree, oriental children followed in cystic fibrosis centers. This could suggest that the same diagnostic reasoning should be used regardless of the patient's racial or ethnic background.

In patients with cystic fibrosis, early indications of pulmonary involvement include coughing and difficulty in breathing. The cough may either be dry and non-productive or may be spasmodic, causing choking, gagging, or vomiting.

The respiratory symptoms of cystic fibrosis are the result of the thick tenacious mucus and exudate that accumulates in the bronchi and bronchioles of the lung. As the mucus accumulates in the airways, regions of overinflation and areas of atelectasis develop. Low grade infection leads to irreversible destruction of the lung tissue.

Other indications of progression of pulmonary disease are increased cough, fatigability, clubbing of the fingers and toes, barrel-shaped chest, and deteriorating pulmonary function. In advanced cases, pneumothorax and hemoptysis may occur. Chronic pulmonary disease is the most serious complication of cystic fibrosis. With proper treatment, the chronic pulmonary process can be stabilized.

Gastrointestinal problems are a frequent complication in cystic fibrosis. These are caused by an inadequate secretion of pancreatic enzymes into the duodenum. This produces symptoms of failure to gain weight despite a large appetite, frequent bulky stools, and rectal prolapse. In 10% of newborns, there will be intestinal obstruction resulting from fecal impaction requiring surgical correction.

Cystic fibrosis is presently incurable. No reliable objective technique has been developed to identify the genetic defect in the estimated ten million carriers in the United States. There is no medical test available to detect with certainty cystic fibrosis in an unborn child. In addition, newborn screening for early diagnosis has many problems and is not practical at this time for general use.

The diagnosis of cystic fibrosis rests primarily on the analysis of sweat to determine whether or not elevated amounts of electrolytes are present. The pilocarpine iontophoresis sweat test is considered to be the basis for sweat testing for cystic fibrosis. There are other sweat testing procedures

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available on the market, however, they do not carry the accuracy and thus the validity of the pilocarpine iontophoresis method. It is the purpose of this article to describe, in detail, the pilocarpine iontophoresis method which is presently approved by both the National Cystic Fibrosis Foundation and the American Academy of Pediatrics.

QUANTITATIVE PILOCARPINE IONTOPHORETIC SWEAT TEST

The sweat glands on a localized area of skin are activated by the iontophoretic introduction of pilocarpine. In the process of iontophoresis, an electrical potential is established so that pharmacologically active ions carry a current and are thereby introduced into the skin.[1] Sweating is therefore induced. The collection, analysis, and interpretation of the sweat sample is a simple procedure which will be explained in detail.

EQUIPMENT NEEDED

1. Current Source
2. Electrodes
3. Distilled or Sterile Water
4. Lemon Joy Dish Detergent (it contains no salt)
5. Acetone
6. Normal Saline 0.9% (Bacteriostatic Sodium Chloride)
7. Pilocarpine HCL Solution 0.2% (should be stored in brown bottle and kept refrigerated when not in use)
8. Gauze Squares 2″ x 2″ (Curity brand or any other salt-free brand)
9. Gauze Squares 4″ x 4″ (Curity brand or any other salt-free brand)
10. Syringes — 3 cc
11. Syringes — 5 cc with needle
12. Square Plastic Shield 2.5″ - 3″ (Could be made from plastic jugs, milk container, etc., which have been sterilized)
13. Tape, 1″ Water Proof Adhesive
14. Forceps
15. Bandage 4″ — Stretch Gauze
16. Weighing Bottle (Sample Bottle)
17. Analytic Balance
18. Cotlove Chloridometer
19. Burette, 2 ml graduate to 0.001 ml
20. Erlenmeyer Flask, capacity 10 ml

Current Source — The current source must provide a twenty volt potential. It must also have a device which will allow the technician to gradually apply the voltage through the electrodes. The current source has to have a milliamperemeter to determine the current flow through the electrodes accurately from a range of zero to five mAmps or zero to ten mAmps. The range should not be higher than ten mAmps because the larger the range, the less accurate the meter will be. A homemade current source is acceptable.[2] The electrodes should be made of pliable copper. They should be square with smooth, rounded edges. The diameter should be about 1.5″ x 1.5″. A metal post may be attached to the electrodes to connect them to the power source. Steel electrodes seem to cause burns more readily than copper ones and should be avoided.

COLLECTION PROCEDURE

Cleanse skin well. The chosen location differs with each patient. The forearm is used in older patients and the back is used in smaller infants. The back may occasionally be used in older patients if they have any open wounds on their forearms such as scratches, needle tracks, etc. From this point until the end of the test, the area of skin to be used should not be touched. If the area is touched, the test should be started again.

Step 1: Wash the arm or back 3 times with distilled or sterile water. A 4″ x 4″ gauze square is saturated with water and then wiped on the area. No gauze is to be used more than once.

Step 2: Lemon Joy is added to a 4″ x 4″ gauze square and then wiped over the entire area which is to be used.

Step 3: The area should be rinsed well with distilled or sterile water.

Step 4: Cleanse the area with acetone. The acetone is used to remove any soap left on the skin or any other substance that the soap could not remove.

Step 5: Rinse the skin well with distilled or sterile water.

Step 6: Dry skin thoroughly.

Sweat Stimulation

Step 1: Place a 2″ x 2″ gauze on each electrode, making sure the gauze completely covers the copper plates. If the copper touches the skin, it could result in small burns.

Step 2: The gauze on the positive electrode is moistened with 2-3 cc of pilocarpine. The negative electrode is moistened with 5 cc of normal saline (bacteriostatic sodium chloride).

Step 3: The positive electrode is placed on the flexor surface of the forearm. The negative

electrode is placed on the opposite side of the forearm. In cases where the arm is too small for both electrodes to fit, as in most infants, the back may be used. When the test is performed on the back, the electrodes should be placed on either side of the spine. The current is slowly raised to 5 mAmps over a period of 5-10 seconds. Iontophoresis has begun and is continued for 5 minutes. The patient may experience a slight discomfort during this step caused by poor contact between the skin, gauze, and electrodes. This discomfort may be alleviated by pressing momentarily on the offending electrode. The electrodes are removed after the current has been turned down slowly, as it was turned up.

Sweat Collection

Step 1: Rinse the skin with distilled or sterile water and dry thoroughly. Care should be taken to avoid contamination of the site of the positive electrode.

Step 2: A plastic shield is placed over the pilocarpine saturated area. Secure two sides of the plastic shield with waterproof adhesive tape.

Step 3: The 2″ x 2″ gauze square is taken with forceps from the previously weighed bottle and placed under the plastic shield. The bottle should not be touched. It should be wrapped in a tissue and a paper towel.

Step 4: Secure the two remaining sides of shield with tape.

Step 5: Wrap a 4″ stretch gauze bandage around the shield and secure with tape.

Step 6: The sweat should be collected for at least 45 minutes. A duplicate test may be done on the other arm if desired. The iontophoresis on the second arm can be started while the first sample is being collected. In small or premature infants, the sample could be allowed to collect for up to 90 minutes. The bandage should not get wet, as the results would be invalid due to the possibility of added liquids to the sweat. After the sweat is collected, a corner of the adhesive tape and plastic shield is lifted and the gauze is grasped with forceps and quickly returned to the bottle in order to minimize evaporation.

ANALYSIS PROCEDURE

The bottle is reweighed. The increase in the weight of the preparation is the amount of sweat obtained. A minimum weight of 100 mg is required for proper analysis.

Step 1: Weigh bottle using an analytical balance with lid on and a chloride-free 2″ x 2″ gauze square inside. This should be done just before the bottle is to be picked up prior to performing the test.

Step 2: Weigh bottle on return. Precaution should be taken to keep from touching bottle before the second weight is taken. Record weight of bottle, gauze, and sweat.

Step 3: Subtract the weight of the bottle and gauze (1st weight) from the weight of the bottle, gauze, and sweat (2nd weight). This is the weight of the sweat.

Step 4: Pipette 15 ml distilled water into bottle to elute sweat from gauze. This specimen can now be refrigerated until the chloride determination is performed.

Reagents

1. Nitric-Acid Reagent — In a one liter flask of approximately 500 ml of water, add 6.4 ml concentrated nitric-acid and 100 ml of glacial acetic acid. Fill volume to one liter mark. Acids and water should be reagent grade. Mix thoroughly. This makes .1 N HNO_3 and 10% HAc.

2. 0.5 mEq/l NaCl Standard — In a liter flask, combine the following: 5 ml of 100 mEq/l NaCl, approximately 800 ml water (distilled), 6.4 ml concentrated nitric acid, 100 ml glacial acetic acid. Dilute to volume.

3. Gelatin Reagent — To 6.2 grams of the supplied dry mixture, add approximately one liter of hot water and heat gently with continuous swirling until the solution is clear.

Chloridometer Determination

Step 1: Switch chloridometer to medium titration range. Turn direct reader to off position.

Step 2: Prepare vial in triplicate for titration as follows:

a) Standard Blank —
 4 ml nitric acidic reagent
 4 drops gelatin

b) Standard —
 4 ml 0.5 mEq/l NaCl
 4 drops gelatin

c) Test Blank —
 3 ml water
 1 ml nitric acidic reagent
 4 drops gelatin

d) Test —
 3 ml sweat solution
 1 ml nitric acidic reagent
 4 drops gelatin

Step 3: Titrate each adding gelatin just before titration.

Record results.

Calculations

1. Dilution Factor (F)

$$\frac{15 \text{ ml } (H_2O)}{\text{grams sweat}} = F$$

2. a) Seconds of standard –
 Seconds of standard blank
 = corrected seconds of standard (S′)
 b) Seconds of test –
 Seconds of test blank
 = corrected seconds of test (U′)

3. Concentration Factor (c)
 0.5 (cl. std.) $\frac{\text{x 4 ml (nitric acidic reagent)}}{\text{x 3 ml (test)}} = 0.67$
 DS 3 ml sweat as compared with 4 ml of 0.5 mEq/l standard.

4. $\frac{U' \text{ x } C \text{ x } F}{S'} \quad \frac{}{(0.67)} = \text{mEq/l of sweat}$
 Example: std. = 33 seconds
 std. blank = 3 seconds
 unknown = 10 seconds
 unknown blank = 2 seconds

$$\frac{33}{-3} \quad \frac{10}{-2} \qquad 8$$
$$\frac{}{30(S')} \quad \frac{}{8(U')} \qquad 30 \text{ x } 0.67 \text{ x DF} = \text{mEq/l sweat}$$

INTERPRETATION

In the presence of clinical symptoms such as recurrent respiratory disease, malabsorption, or with a family history of cystic fibrosis, the findings of a sweat chloride above 60 mEq/l is consistent with the diagnosis of cystic fibrosis. Fifty to sixty is borderline and generally suggests repetition of the test. There is no relationship between the electrolyte concentration and the severity of the disease.

SUMMATION

Even though cystic fibrosis is presently incurable, advances in recent years in treatment programs have changed the prognosis greatly. An increasing number of cystic fibrosis patients are surviving to adolescence and adulthood. In 1966, the median life expectancy for cystic fibrosis was 11 years of age; today it is 20 years of age.

The diagnosis of cystic fibrosis carries with it a serious, but far from hopeless, prognosis. Early diagnosis, improved treatment, and periodic routine medical evaluations have been shown to significantly improve the outlook for cystic fibrosis patients. With proper care, many cystic fibrosis patients are reaching adulthood, leading relatively normal lives, and assuming responsibility for their own continuing care. It is because of this increased hope that justification is made for an emphasis on proper diagnostic procedures in determining the presence of cystic fibrosis such as described in this article.

A complete kit for Iontophoretic Stimulation can be obtained from:

1. Farrall Instrument Company
 Post Office Box 1037
 Grand Island, Nebraska 68801
 Phone Number: (308) 384-1530
 (either battery or A.C. converter)
2. Dr. Harry Shwachman
 Children's Hospital Medical Center
 300 Longwood Avenue
 Boston, Massachusetts 02115
 Phone Number: (617) 735-6998
 (A.C. converter)

REFERENCES

1. Gibson, E. E., di Sant'Agneses, P. A., and Shwachman, H.: Procedure for the Quantitative Iontophoretic Sweat for Cystic Fibrosis.
2. Gibson, L. E., and Cooke, W. E.: Pediatrics 23: 545, 1959.
3. "Gap" Conference Reports — Problems in Sweat Testing, 1975.



GUEST

EDITORIAL

The College of Medicine in 1983: Pride and Concern

Thomas Allen Bruce, M.D.*

Our medical school has a problem. As a consequence of the rapid changes which have occurred over the past five years in organizational structure, the physical plant, and the makeup of the faculty, nobody knows the school anymore, or has a good feel of what's happening inside. In fact, a lot of things are happening, and most of these will be of considerable interest to Arkansas physicians.

Towards the end of the 1970's decade the school still was deeply ingrossed in its societal mission to train additional primary care physicians and to develop a full panoply of incentive programs that would reverse the traditional bias against practice in smaller towns. A twenty-point program had been installed in 1975 to turn that tide, with the most important components a strengthened Department of Family Medicine, a vigorous and challenging outreach program for student and housestaff training (the Area Health Education Centers or AHEC's) and a resourceful team of field workers whose job was to train needy towns how to recruit and retain doctors (the Office of Community Medical Affairs). Another key goal was to keep the needs for small town physicians highly visible and to get the students themselves involved in the problem: quite clearly a large number of these student doctors ultimately would see themselves as part of the answer. The end result of those efforts has been dramatic — since 1975 291 net new physicians have settled in Northwest Arkansas, 190 in Northeast Arkansas, 75 in Central Arkansas (excluding Little Rock), and 170 in South Arkansas. Now, suddenly, there is talk of a physician surplus instead of a physician shortage.

Rather quietly five years ago another effort began, to upgrade the *quality* of education in our medical school. Recognizing that over the years we have had the good fortune to keep a handful of master teachers in the school, and that our tradition was one of in-depth and practical training leading to well rounded and confident graduates who had excellent skills in clinical problem-solving, graduates who made generally outstanding house officers, we wanted to be confident that the knowledge base of our students was as good as their peers at other medical schools. The content of the curriculum therefore was reviewed in considerable depth, and more frequent and rigorous examinations were given to allow early detection of poor learning. The result: recent outstanding scores of Arkansas graduates on the massive 3-day FLEX test for medical licensure, one in which our students perform above the national average in every single category, basic science and clinical, and in which Arkansas has the highest success rate of any of the fifty states.

Still another quiet revolution began about three years ago with a major effort to upgrade the medical school's base of biomedical research and clinical investigation. It has to be recognized that any school with such an aggressive outreach program in primary care education leaves itself vulnerable to becoming little more than a trade school. Arkansas, with its built-in provincialism in an admissions policy set by state law to exclude all non-residents, with an enormous need for general doctors in a rural and agriculture-based economy, and with a longstanding weakness in research tools and faculty, was uncommonly vulnerable to mediocrity. Faculty leaders agreed that we must make a fundamental commitment to being a University in the truest sense, that of discovery of new knowledge in addition to just passing along the old.

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And so began an increased effort to recruit new faculty who were competitive in scholarship, who were interested not only in excellence in care but in the evolution of ideas and new concepts, faculty who were disciplined to look critically at the margins of our knowledge (where every physician practices, every day) and to challenge the muddle-headed thinking of much that we do. Policies of faculty performance were updated to reflect an emphasis towards additional investigative effort, and promotion to senior faculty rank came more and more to depend on balanced teaching and research, not just popular teaching alone. Here again we have reaped what we have sown; a few dozen original research papers in the faculty a few years ago have increased now to several hundred per year, and in several fields Arkansas has become the center of national attention for its productivity in new and exciting research findings.

This year we have a new sense of pride in having achieved a clean sweep of the Southern "big three" clinical research societies. Dr. Robert Fiser of our faculty serves as President of the Southern Society for Pediatric Research, and Drs. Peter Kohler and David Lipschitz of our faculty serve, respectively, as President-elect of the Southern Society for Clinical Investigation and of the Southern Section, American Federation for Clinical Research. Not only did these three faculty representatives provide the top leadership, but research papers from the Arkansas faculty, students and housestaff dominated the New Orleans meetings, with thousands of national academicians present. And impressed!

All of these efforts are not finished; new reinforcement and commitment must be made year after year. But in 1983 we have one large final goal which remains to be realized: we must upgrade our clinical care programs by strengthening the faculty group practice effort if we are to remain viable. It is an era of competition and struggle for survival everywhere in medicine, and the faculty is not immune. State appropriations have fallen farther and farther behind in supporting our needs, so that the clinical faculty now must earn 78% of their own salaries through clinical earnings. Because of the depressed economy we've been seeing more and more patients who have no ability to pay, so that from 40% to 75% of our patient charges are unreimbursed, depending on the specialty group involved. With further cutbacks in Medicaid and Medicare looming (our greatest sources of income) we cannot be complacent. If the number of indigent patients cannot be reduced, and it cannot because we are a last resource for so many, then at least we must find more paying patients to support the balance. Private practitioners therefore will find the faculty making new efforts to recruit patients in the months to come. And those efforts will be directed at teaching patients who can pay (or who have insurance), rather than only those who are hopeless and derelict. We must do this for the sake of our students and for the good of the school. I hope that all state physicians will understand these needs and will work with us hand in hand in the continuing effort to build one of America's truly great academic medical centers in Arkansas.

"From Other Years"*

Journal of The Arkansas Medical Society
Vol. 4 No. 2 August, 1893 p. 86

MINUTES OF THE 18th ANNUAL SESSION OF THE ARKANSAS MEDICAL SOCIETY

The committee appointed to prepare the invitation to the American Medical Association, reported the following form:

INVITATION TO AMERICAN MEDICAL ASSOCIATION TO MEET AT HOT SPRINGS, ARK., IN 1894.

"To the American Medical Association in Session at Milwaukee, Wis.:

In compliance with the instructions of the Arkansas Medical Society, at its eighteenth annual session, held at Batesville, May 31, June 1, 2, 1893, we take pleasure in transmitting the following preamble and resolutions, unanimously adopted on the 2d day of June, 1893.

"WHEREAS, The Hot Springs Medical Society, the Chamber of Commerce and Mayor of Hot Springs, the Business Men's Club, and His Excellency the Governor of the State of Arkansas, have each, upon thorough investigation through

special committees appointed for the purpose, decided to invite the American Medical Association to hold its annual meeting in 1894 in the City of Hot Springs, Ark.; therefore,

"*Resolved*, That the Arkansas Medical Society heartily approves the action already taken, and in behalf of the medical profession of Arkansas extends a cordial invitation to the American Medical Association to hold its next annual session in Hot Springs, and hereby instructs its delegates to that association to urge the acceptance of our invitation, promising that we will spare no effort to make its visit to our State and the Southwest both pleasant and profitable.

"_____, *President.*

"_____, *Secretary.*"

The report was adopted.

From the University of Arkansas for Medical Sciences Library, History of Medicine/Archives.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The total budget unveiled by President Reagan earlier in the month calls for $848.5 billion in government spending for fiscal year 1984.

Of that total, the U. S. Dept. of Health and Human Services accounted for $288.8 billion, the third largest budget in the world, after the United States and Soviet Union, according to a statement by department officials.

The overwhelming proportion of the HHS budget is slotted for the Social Security Administration at $194.7 billion. Budgets of specific interest to medicine are the Public Service funds targeted at $7.9 billion, and the Health Care Financing Administration budget of $80.7 billion.

Included in the HCFA budget are dramatic proposals to change the Medicare program. Among them:

- A prospective payment system for hospitals.
- Restructured coinsurance for hospitalized Medicare recipients.
- A voluntary voucher program that would allow Medicare recipients to enroll in prepaid health plans, such as health maintenance organizations (HMOs).
- A freeze on physician fees for one year, with no rules about assignment, meaning that physicians can accept Medicare reimbursements as payments in part and bill patients for the remainder.
- An increased premium charge for Part B coverage of physician fees, including an index for the deductible.

Other initiatives include a co-payment plan for Medicaid recipients calling for $1 per outpatient visit and $1 per hospital day for beneficiaries on welfare ($1.50 and $2 for beneficiaries not on welfare.)

The budget also includes a proposal to limit the tax-free amount an employer can contribute to health benefits. The line would be drawn at $175 per month for family coverage and $70 per month for individual coverage.

If the proposals are accepted, they will hold the annual growth rate of the HHS budget to 5%, down from a high of 17% in fiscal year 1981.

The long-awaited consumer choice, or competitive-model plan for health care, appears to have been shelved by the Reagan Administration. Instead of a comprehensive plan that would interconnect public and private payment systems for medical care, the Administration has offered a piecemeal approach that incorporates some of the competitive ideas, such as the voucher program and the tax limit on employer benefits contributions.

The most startling proposal relates to the co-payment provisions for Medicare recipients, both in the hospital plan and in the physician plan. Observers long have thought that government

would not propose changes in the benefits packages, but these proposals look very much like such changes.

The Medicare catastrophic coverage proposal is billed in the budget as a provision of "unlimited hospital coverage of catastrophic illness for the first time."

Explaining the provision, HHS officials pointed out that "under current law the beneficiary hospitalized in 1984 for 150 consecutive days would owe $13,475 from his or her own pocket.

"The beneficiary would also bear the full cost of all subsequent hospital days," they added.

"Under the new plan, the beneficiary's expenses would be $1,530, with no co-insurance after 60 days."

While the coverage looks greater, the fact is that the government expects to save $663 million in fiscal 1984 by implementing the plan.

What it in effect will do is shift co-payment to the area of greater activity for Medicare hospitalization. Under the plan now in effect, recipients pay the full cost of hospitalization on the first day, but from the second to the 60th day there is no cost sharing. From the 61st to 90th day, the recipient share now would be $87.50 per day, and $175 per day from the 91st to the 150th day.

The new plan calls for the same full pay for the first day of hospitalization; about $28 per day from the second to the 15th days; about $17.50 per day from the 16th to 60th day; and catastrophic (no pay) coverage after the 60th day.

Explaining the budgetary savings, Robert J. Rubin, M.D., HHS Assistant Secretary for planning and evaluation, pointed out that the average hospital stay for a Medicare recipient is 11.5 days. This will add $280 from each recipient to the program, resulting in the projected savings, he said.

He added that only 200,000 of Medicare recipients, numbering some 29 million, ever stay more than 60 days during a given period.

Additional savings will be realized by the prospective payment of hospitals based on 467 diagnosis-related groups (DRGs). This builds on the Medicare case management plan "associated with hospital reimbursement changes enacted in the Tax Equity and Fiscal Responsibility Act," officials said.

The projected freeze on physicians' reimbursement under Medicare is expected to save $700 million, officials said. Dr. Rubin said that about half of the physicians in the country accepted assignment (Medicare reimbursements as payment in full). He added that there was nothing in the proposed rules to inhibit physicians from passing on fee increases to patients.

The budget proposals also anticipate gradual change in the premium and deductible for optional Medicare physician coverage under Part B of the program.

"When Medicare was established the premium was intended to cover 50 percent of Part B costs, but premiums now cover less than 25 percent of costs," officials said.

That percentage would move back up to 35 percent by 1988 if the new proposals are accepted, Dr. Rubin said. The per-month premium of $12.20 will remain in effect until the end of the year.

In addition, the deductible will be indexed to keep pace with costs. That savings will amount to $46 million in fiscal 1984. The premium will result in $359 million additional costs for fiscal 1984, but earn $575 million in savings for the following fiscal year.

The increases in hospital co-payments, premium payments, and the prospect of additional billings from physicians who do not accept assignment probably will make enrollment in HMOs more attractive for Medicare recipients, Dr. Rubin said.

The new budget proposes to sweeten that possibility by increasing what the government will pay to "an amount equal to 95 percent of per-person costs of the Medicare program." Dr. Rubin pointed out that the government now pays only 80 percent.

"Medicare would remain the basic national health plan for the elderly, and alternative plans would have to provide coverage at least equal to Medicare's," officials said.

"The voucher plan in essence invites private providers and insurers to 'outbid' Medicare if they can. The voucher program would be entirely voluntary, and beneficiaries could re-enter the Medicare system.

"In the case of low-priced alternative plans, cash rebates could be made to the beneficiaries."

The cap on tax-free health benefits would result in an addition of $2.3 billion in income tax revenues in fiscal 1984, but that gain in revenue was not the main thrust of the proposal.

"The point here is that government will no

longer subsidize medical care in that way," Dr. Rubin said.

The initial impact may be limited, since the average monthly health benefit is $125, well below the proposed $175 per month cut-off for family coverage.

"Currently, about 30 percent of those with employment-based health coverage receive employer contributions above these limits," officials said.

"While individuals and companies would remain free to purchase as much health coverage as they desire, the new provision would eliminate the bias that now works in favor of high-priced coverage and against comparable higher wages," they said.

In addition to the Medicaid co-payments proposals, which would add an estimated $249 million in savings, the budget proposes maintaining reductions in the federal share of Medicaid.

"The plan would extend beyond fiscal 1984 the reduction in federal payments to states passed in the Omnibus Budget Reconciliation Act of 1981," officials said.

"The reduction would be cut, however, from 4.5 percent to 3 percent. The reduction will remain in place for an indefinite period, leaving in place the incentive for states to continue seeking new cost-saving Medicaid policies."

Officials said they expected to save $524.9 million in fiscal 1985 by extending the reduction, adding that there would be no effect felt during 1984.

Other HCFA cuts include a closing down of the professional standards review organizations regulatory effort. In the past three years, funding has gone from $96 million to $50 million to zero proposed for fiscal 1984. Also shut down was the end-stage renal disease councils program previously budgeted at $5 million.

Proposed budgeting for the National Institutes of Health was increased by $73 million to $4.077 billion in fiscal 1984, and budgets for the Alcohol, Drug Abuse, and Mental Health Administration was increased by a modest $1 million to $421 million.

In for severe paring was the Health Resources and Services Administration, whose budget was cut from $1.207 billion in fiscal 1983 to $977 million in 1984.

Totally eliminated from that budget was the health planning program, previously budgeted at $58 million, and drastically cut by $56 million was the health professions education program, now budgeted at $116 million.

Also cut within the Health Resources and Services Administration was the Indian Health Service, down $7 million from $660 million in fiscal 1983 to $653 million in fiscal 1984.

Funding for the National Health Service Corps would continue at $96 million, providing for a field strength of 3,283 physicians and other health personnel.

The Food and Drug Administration budget would be increased $19 million to $386 million for fiscal 1984; and the Centers for Disease Control would increase to $270 million from $249 million in fiscal 1983.

Block grants for health services in prevention; alcohol, drug abuse, and mental health; primary care; and maternal and child health would be maintained at the same budget level of $1.357 billion for fiscal 1984.

* * * *

The AMA responded to the Reagan budget proposal by cautioning Congress not to renege on long-term promises to ensure quality health care for the nation's elderly and poor, infants and needy young mothers by further cuts in Medicaid, Medicare and other vital health programs.

"We must caution against establishing unrealistic targets for savings in health programs that would result in limiting access and availability of health care for those individuals for whom the federal government has assumed a primary financial responsibility," said AMA's Executive Vice President James H. Sammons, M.D., before the House of Representatives Task Force on Entitlements.

"Like you, the AMA is concerned about the growing deficit," Sammons told House members. "Yet," he said, "Medicare and Medicaid programs have been the targets of an unending stream of cuts. While AMA would support changes in these programs to improve their efficiency, Sammons said, these programs should not be targeted for further cuts or restructuring "unless adequate assurances are provided that access to appropriate high quality care will be available to all beneficiaries of the program."

Among the 1984 budget proposals challenged by the AMA is one that would delay eligibility for Medicare coverage by one month for those Americans who reach 65. AMA cited this as an example of shifting costs to the private sector.

AMA advised against a proposal to extend the 1981 Reconciliation Act reductions in Medicaid matching payments which AMA points out would simply shift an increased burden for the program to the states, many of which are also facing severe budget difficulties.

Under the latter proposal, Sammons said, "the needy in our society — those most affected by the recession and who can least afford to pay for their medical care — would be hurt the most."

AMA urged the House Task Force to consider increasing funding for the health block grants, including funds for alcohol and drug abuse and mental health programs but with particular emphasis on the maternal and child health block grant.

"The importance of maternal and child health care is self-evident," Sammons told House members. "Access to high quality prenatal, postnatal and pediatric care has profound impact upon the outcome of pregnancy and the lives of children. . . . An investment in these new and young lives will inure to the benefit of this and future generations."

Sammons also called for increasing funding for the National Institutes of Health "to maintain our nation's biomedical research program to benefit all of us with new medical knowledge which can save lives or improve the quality of life."

AMA warmly supported the Administration's 1984 budget proposal for a tax "cap" on employer-provided health insurance. AMA has supported the concept of such a limitation since 1978 because it would restrain the demand for medical services rather than regulating the supply which would result in rationing, Sammons said. AMA also supported the Administration's proposal for catastrophic coverage for Medicare beneficiaries, with appropriate copayment during early hospitalization. But Sammons expressed the Association's concern over the amounts of copayment and the timing of their implementation.

AMA took issue with a number of Administration budget proposals for the coming fiscal year. Among these:

- Adoption of a nationwide system of prospective pricing for hospitals unless the system is proven effective both in saving costs and maintaining the quality of health care now available to the American people.
- A voucher system for Medicare beneficiaries which AMA also says is yet unproven.
- A proposal to eliminate an incentive target rate for hospital payments in future years that would allow necessary development and use of new technologies in hospitals.
- A one year freeze on physicians' reimbursement under Medicare's "reasonable charge" system. Sammons said that AMA believes that it is unfair to freeze the costs of one sector of the economy while not asking attorneys, architects and other professionals to accept a freeze and while allowing prices paid other suppliers to rise.

* * * *

The AMA has testified against the Reagan Administration's proposal to base Medicare payments to hospitals on the patient's diagnosis.

Appearing before the House Ways and Means Subcommittee on Health, Jerald Schenken, M.D., a pathologist from Omaha, Neb., and Vice Chairman of the AMA's Council on Legislation, recommended that the committee "reject the Administration's proposal to impose an untried system across the nation."

He called instead for more prospective payment demonstration projects and further analysis of the demonstration projects already in place.

The AMA opposes "a radical change in the Medicare hospital reimbursement system without assurances that quality of care will be maintained," he explained.

Dr. Schenken said the proposal, which would set a price for each of 467 diagnosis-related groups (DRG's) and which the Administration wants to implement nationwide Oct 1., "has never been tried, even on a limited scale."

The DRG experiment in New Jersey, which began three years ago, differs significantly from the Administration proposal, and in any event, the New Jersey experiment has not been evaluated yet, he said.

The Administration's proposal, which has not been submitted to Congress as legislation, aims to control the spiraling costs of Medicare, which now devotes 68% of its $60-billion budget to hospitals.

Proponents of the plan say that if hospitals were paid per DRG, they would have an incentive to be efficient. Hospitals now are reimbursed by Medicare on the basis of their costs.

The DRG system divides illnesses into 467 categories by primary and secondary diagnoses, the primary procedure used (if there is surgery), the

age of the patient and the patient's discharge status. DRG 167, for example, is an appendectomy without complicated principal diagnosis, complications, or associated illness for a patient under 70.

The American Hospital Association also has proposed a DRG-based prospective payment system for Medicare, although it differs from the Administration's proposal on several points, particularly as to how prices for each DRG should be determined.

Dr. Schenken said the AMA "has some of the same concerns about the AHA proposal as it has about the Administration's." He added, however, that he saw merit in experimenting with the proposal, presumably on a trial basis on a state or local level.

The AMA supports experimentation with prospective payment systems that create incentives for hospitals to be more cost conscious, Dr. Schenken testified. He called upon the committee to authorize that the Administration's proposal "and other prospective pricing proposals" be demonstrated on a limited scale in various states before being considered for national implementation.

"Continued demonstration projects and thorough analysis can lead to the development of a reasonable and effective prospective pricing methodology," he said. "While this may not immediately reach the desired cost savings, it will not place Medicare beneficiaries at risk of facing a loss of quality medical care."

Dr. Schenken said that if a hospital were underfunded by Medicare, it would respond by shifting costs to other payers, deferring such costs as maintenance, reducing nursing and other essential patient care staff, and postponing or eliminating necessary modernization and technological improvements, thus depriving patients of the highest quality of care.

"In extreme cases hospitals providing essential care could be forced to close," he said.

He added that the AMA was concerned that the Administration's proposal could foster a two-tiered system of health care, with one level of care for private-pay patients and one for Medicare patients.

The Administration's proposal differs from the New Jersey system on several important points. The New Jersey system applies to all payers — private insurers, Medicaid, and Blue Cross. The Administration's proposal would apply only to Medicare. Also, New Jersey has no hospitals under 100 beds. The Administration's proposal would apply to all hospitals, except hospitals that are sole providers of care in a community.

* * * *

An agreement between the federal government and the American Medical Association will allow the Medicare and Medicaid programs to use the AMA's Current Procedural Terminology, fourth edition (CPT-4), for claims processing.

The agreement allows the Health Care Financing Administration (HCFA) unrestricted use of the AMA copyrighted system of nomenclature and codes for describing medical procedures performed by physicians. It was signed by departing Health and Human Services Secretary Richard Schweiker and AMA Executive Vice President James H. Sammons, M.D.

Dr. Sammons called the agreement "a major step forward for practitioners, suppliers, and payers."

"This is quite a day for us," Dr. Sammons said at the signing ceremony. "It's a culmination of 10 years work, five (HHS) secretaries, and four presidents of the United States. It speaks exceptionally well for Secretary Schweiker that we are able to sign this."

CPT-4 will be used as the basis for reporting most physician services in HCFA's Common Procedure Coding System. Schweiker noted that in the past Medicare fiscal agents have used a wide variety of descriptions and numeric codes for processing claims from physicians and other suppliers of medical services. Some agents added local modifications for new procedures and services. The mixture of systems caused extra expense for the Medicare and Medicaid programs.

Medicare contractors will be required by HCFA to use the new system as the contractors convert their claims processing systems. Many states are expected to convert to the new program for their Medicaid programs, as well.

The AMA's nomenclature system was chosen for incorporation into the federal system because of its general acceptance and use by physicians nationwide, Schweiker said.

Schweiker noted that the system also will provide a more accurate data base for research and for predicting trends in both payments for and utilization of medical services, and will simplify reporting for physicians.

The system was tested in the Medicare and

Medicaid programs in South Carolina for the year beginning July 1, 1980. An analysis by HCFA showed the test to be successful with no adverse impact.

Under the agreement, the AMA is responsible for maintaining and updating CPT-4 through the establishment of a 10-physician editorial panel. Seven of the panelists are to be appointed by the AMA, one by HCFA, one by the Health Insurance Assn. of America, and one by the Blue Cross and Blue Shield Assn. All are subject to AMA approval.

"We're delighted to welcome HCFA representatives on the new editorial board," Dr. Sammons said. "It's an excellent example of private and public cooperation."

The AMA and HCFA also agreed to encourage health insurers to adopt CPT-4 voluntarily.

Schweiker called the agreement a step "toward meeting our common goal of achieving a national uniform coding and nomenclature system for reporting physician services."

* * * *

The AMA has urged the White House and Congress to continue the process of "bilateral and verifiable" nuclear arms reduction. In letters to the President and four top congressional leaders, AMA Executive Vice President James H. Sammons, M.D., said that the current level of nuclear armaments represents a significant threat to the public's health and welfare. Dr. Sammons conveyed the concerns that were expressed by delegates to the AMA Interim meeting in Miami Beach last December. At that meeting, the House adopted a resolution calling for nuclear arms reduction.

Noting that the arsenals of the United States and the Soviet Union now include thousands of nuclear warheads, Dr. Sammons said that there is no adequate medical response to the consequences of nuclear exchange.

In targeted areas, millions of people could perish outright, including medical and health care personnel. Additional millions could suffer severe injury, including massive burns and exposure to toxic levels of radiation, without the benefit of even minimal medical care. Medical and hospital facilities and other resources likewise could be destroyed, Dr. Sammons said.

"Although it is difficult to believe that any civilized nation would ever initiate the use of these terrible weapons, their existence and continued development compel a humane and concerned public to consider seriously the implications of such an awesomely destructive force," Dr. Sammons said.

* * * *

COUNCIL MINUTES
March 13, 1983

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, March 13, 1983, in the Camelot Hotel, Little Rock. Present were Council members Burge, Henry, Crow, Shuffield, Smith, Wallick, Kolb, Osborne, Lawson, J. Bell, Lytle, P. Bell, Langston, Sanders, Bracken, Clardy, Jones, Jouett, Logan, Purdy, Williams, Lilly, Chudy, Phillips, Saltzman, Ellis, Andrews, P. Kolb, and Townsend. Others present were: Milton Deneke, Robert Benafield, George Mitchell, Thomas Bruce, Harry Ward, Peter Kohler, David Lipschitz, James Weber, T. J. Smith, Mr. Mitchell, Mr. Shoptaw, Mr. LaMastus, Miss Richmond, and C. C. Long.

The Council transacted business as follows:

1. Heard a report from President Morriss Henry on the reception co-hosted by the Society. The Council directed that letters of appreciation be forwarded to Dr. and Mrs. Ellery Gay and Mrs. Louis Hundley for their assistance with the reception. Dr. Henry also reported on several legislative issues under consideration by the State Legislature.
2. Councilor Lloyd Langston reported on the 1983 Leadership Conference of the American Medical Association which he attended as one of the Society's representatives.
3. The Council heard a discussion by Mr. Bob Shoptaw of Arkanass Blue Cross-Blue Shield of features of three alternate delivery and financing systems for health care (Preferred Provider Organizations, Individual Practice Associations, and Health Maintenance Organizations).
4. Upon motion of J. Bell, the Council approved actions of the Executive Committee in a meeting held January 27, 1983.
5. Dr. Long discussed a request that a paramedical group be allowed to have a hospitality booth at the 1983 convention of the Society and the Executive Committee recommendation against approval. Upon motion of Williams, the Council voted to support the Executive Committee recommendation. Upon motion of Henry, the Council further

voted to request that the Society's Legislative Committee meet with representatives of the paramedical group concerned to discuss mutual interests.

6. Upon motion of Shuffield, the Council voted to direct the executive vice president to write the Legislative Council requesting that the Society be informed of hearings or discussions pertaining to licensing of x-ray technicians between now and the next session of the Legislature.
7. Upon motion of Lilly, the Council directed that physicians appointed to the Medical Services Review Committee whose intent was not to attend all meetings of the committee be replaced by other representatives of the specialty involved. The committee member is to be selected from nominations submitted by the specialty group.
8. Upon motion of Williams, the Council voted to distribute to the employees the amounts credited to them on the Society books toward the defined contribution plan, plus interest, for the period from October 1980 through December 1981 because the new plan was not in effect at that time and the funds are not eligible for the defined contribution plan approved in 1982.
9. Upon motion of Jones, the Council voted to pay the balance on the word processing equipment.
10. Upon motion of Williams, the Council voted to endorse the statement of the Board of Regents of the American College of Surgeons dated February 6, 1983, regarding Proposed Revisions in the Medical Staff Standards of the Joint Commission on Accreditation of Hospitals. A resolution in support of that position is to be presented to the House of Delegates of the Society in May and, if approved, to the American Medical Association in June.
11. The chairman of the Legislative Committee, Dr. Weber, brought the Council up to date on medical issues before the current session of the General Assembly.

The Executive Committee then went into Executive Session and the following actions were recorded by Secretary Shuffield:

1. The Council approved a motion that the Society give Miss Richmond $500 per month to begin at retirement after 35 years of service or longer and continue the payments until she reaches 65 or her death, at which time the payments would cease to be distributed. The principles set out in Attachment #11 of Mr. Mitchell's report on the termination of the defined benefit plan will continue in effect, deleting the formula concerning the monetary agreement.
2. The Council approved a motion that Mr. Mitchell be authorized to determine the amount of money necessary to be set aside to earn interest in sufficient amount to take care of this obligation, if accepted.

APPROVED: John P. Burge, M.D.
Chairman of the Council



RESOLUTIONS



DR. CHARLES W. WALLIS

WHEREAS, the members of the Pulaski County Medical Society are grieved by the recent death of our colleague, Charles W. Wallis, M.D., and

WHEREAS, Dr. Wallis had been a highly esteemed member of this Society for forty-nine years during which time he had contributed immeasurably to the betterment of the organization; and

WHEREAS, Dr. Wallis was recognized as a pioneer in this area, having been the first specialist in pediatrics.

BE IT THEREFORE RESOLVED:

THAT, this resolution be made a part of the permanent records of this Society; and

THAT, a copy of this resolution be forwarded to Dr. Wallis' family as a token of our deep sympathy; and

THAT, a copy be forwarded to the Journal of the Arkansas Medical Society for publication.

By Order of the Memorials Committee,
Pulaski County Medical Society
H. Elvin Shuffield, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M.D.

keeping up

Category 1 Continuing Medical Education Programs Available in Arkansas

CADUCEUS CLUB SCIENTIFIC PROGRAM

Jack Blackshear, M.D., Course Director, *June 18, 9:00 a.m. to 12:00 noon,* UAMS Education II Building, Room G/141 A & B. Two hours Category I credit.

COLON CANCER UPDATE

Presented by Steven Clift, M.D., *June 20, 7:00 p.m.*, Private Dining Room, Memorial Hospital, North Little Rock. One hour Category I credit.

ABDOMINAL SURGERY IN ADULTS — STATE OF THE ART

Presented by Claude E. Welch, M.D., F.A.C.S., Department of Surgery, Massachusetts General Hospital, Boston, *June 21, 7:00 p.m.*, Education Building, Baxter General Hospital, Mountain Home. Two hours Category I credit.

FAMILY PRACTICE INTENSIVE REVIEW

Presented by Ben N. Saltzman, M.D., *June 24-26 (Friday:* lectures 8:30 a.m. - 11:45 p.m.; 12:45 p.m. - 5:00 p.m.; *Saturday:* lectures 8:00 a.m. - 12:15 p.m.; 1:00 p.m. - 4:15 p.m.; *Sunday:* lectures 8:00 a.m. - 12:15 p.m.; 1:00 p.m. - 4:15 p.m.), State Health Department Auditorium, 4815 West Markham, Little Rock. Sponsored by UAMS. Twenty-one hours Category I credit. Registration fee: Physicians $115; UAMS Residents and Faculty $15; Students free.

NEW HYPERTENSIVE THERAPY

Presented by Ron Hughes, M.D., *July 18, 7:00 p.m.*, Private Dining Room, Memorial Hospital, North Little Rock. One hour Category I credit.

RECURRING EDUCATION PROGRAMS

Unless otherwise indicated, programs are for one to two hours Category I credit.

EL DORADO — AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pathology Conference, second Tuesday, 12:30 p.m. to 1:30 p.m., AHEC-South Arkansas.
Colposcopy-Pap Smear Clinic, fourth Tuesday, 12:00 noon to 1:00 p.m., AHEC-South Arkansas.
Internal Medicine Conference, first, second and fourth Wednesday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m. to 1:30 p.m., Warner Brown Hospital.
Obstetrics-Gynecology Conference, second and fourth Thursday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Behavioral Sciences Conference, first and fourth Friday, 12:45 p.m. to 1:30 p.m., AHEC-South Arkansas.
Pediatric Conference, second and third Friday, 12:30 p.m. to 1:30 p.m., second Friday, Warner Brown Hospital; third Friday, Union Medical Center.

FAYETTEVILLE — AHEC-Northwest

Medicine Teaching Conference, each Saturday, 7:30 a.m. to 8:30 a.m., Washington Regional Medical Center.

FAYETTEVILLE — VA MEDICAL CENTER

Pathology Conference, third Tuesday, 3:00 p.m., Conference Room.
Radiology Conference, first and third Thursday, 1:00 p.m., Conference Room.
Mortality Conference, second Thursday, 3:00 p.m., Conference Room.
Peer Exchange, June: "Endocrinology," Richard Jordan, M.D.; July: "Cardiology," John Watson, M. D.

FORT SMITH — AHEC

Tumor Conference, each Tuesday, 12:00 noon, Sparks Regional Medical Center, Fourth Floor Conference Room.

JONESBORO — AHEC-Northeast

Interesting Case Conference, second and fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Methodist Hospital of Jonesboro Cafeteria.
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas.
OB/GYN/PED Conference, last Tuesday, 5:30 p.m., St. Bernard's Dietary Conference Room.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room.
Continuing Medical Lecture Series, each Friday, 12:00 noon, St. Bernard's Dietary Conference Room.
Chest Conference, third Friday, 12:00 noon, St. Bernard's Dietary Conference Room.

As organizations accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK — ARKANSAS CHILDREN'S HOSPITAL

Pediatric Radiology/Genetics Conference, each Monday, 12:00 noon, Burn Conference Room.
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Physicians' Conference Room.
Primary Care Seminar, each Wednesday, 8:15 a.m., Physicians' Conference Room.
Infectious Disease Conference, second Wednesday, 12:00 noon, Physicians' Conference Room.
Problem Case Conference, each Thursday, 12:00 noon, Physicians' Conference Room.

LITTLE ROCK — BAPTIST MEDICAL CENTER

Pulmonary Conference, each Tuesday, 12:00 noon to 1:00 p.m., Auditorium.
Cardiopulmonary Resuscitation Course, third Tuesday, 7:00 p.m. to 1:00 a.m., Shuffield Auditorium. Six hours Category I credit. (Pre-registration with Department of Medical Education required, phone 227-2672.)
Emergency Medicine Conference, first Wednesday, 12:30 p.m. to 1:30 p.m., Conference Room #1.
Case of the Month, second and fourth Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
General Internal Medicine Conference, third Wednesday, 12:00 noon to 1:00 p.m., Conference Room #1.
Renal Conference, fifth or last Wednesday each month, 12:00 noon to 1:00 p.m., Conference Room #1. (When there are four Wednesdays in the month, conference will be on fourth Wednesday and there will only be one Case of the Month Conference.)
Morbidity and Mortality Conference, first Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1. CANCELLED FOR JUNE, JULY, AUGUST.
Surgery Conference, second, third, fourth and fifth Thursday, 8:00 a.m. to 9:00 a.m., Conference Room #1. CANCELLED FOR JUNE, JULY, AUGUST.
Anesthesiology Conference, third Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.
Cardiology Conference, fourth Thursday, 7:00 a.m. to 8:00 a.m., Conference Room #1.

LITTLE ROCK — ST. VINCENT INFIRMARY

Interhospital GI Problems Conference, first Monday, 6:00 p.m. to 7:30 p.m., Room E155, Education Wing.
Pediatric Conference, first Tuesday, 12:30 p.m. to 1:30 p.m., Room E159, Education Wing.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m. to 6:30 p.m., Room E159, Education Wing.
Gynecology Conference, second Tuesday, 5:30 p.m. to 6:30 p.m., Radiology Classroom S1025. CANCELLED FOR JUNE, JULY, AUGUST.
Peripheral Vascular Disease Conference, third Tuesday, 6:00 p.m. to 7:00 p.m., Room E159, Education Wing.
Neuropathology Conference, third Tuesday, 5:30 p.m. to 6:30 p.m., Room S1169 Laboratory. CANCELLED FOR JUNE, JULY, AUGUST.
Nephrology Conference, third Wednesday, 7:30 a.m. to 8:30 a.m., Room E159.
Pulmonary Conference, first and third Thursday, 12:00 noon to 1:00 p.m., Room E159, Education Wing.
Cardiology Conference, second and fourth Thursday, 12:00 noon to 1:00 p.m., Room E155, Education Wing. CANCELLED FOR JUNE, JULY, AUGUST.
Hematology-Oncology Conference, second Thursday, 12:00 noon to 1:00 p.m., Room S1169, Laboratory.

LITTLE ROCK — UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Psychiatry Grand Rounds, each Monday, 12:00 noon to 1:00 p.m., Child Study Center Auditorium.
Internal Medicine Grand Rounds, each Thursday, 8:00 a.m. to 9:00 a.m., Auditorium, Shorey Building, UAMS.
Surgery Grand Rounds, each Saturday, 9:00 a.m. to 10:00 a.m., Education II Building, Room G/131 A&B.

TEXARKANA — AHEC-Southwest

AHEC Tumor Conference, first Wednesday, 7:00 a.m., St. Michael Hospital.
AHEC Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
AHEC Regional Nephrology Conference, last Wednesday, 7:00 a.m., St. Michael Hospital.

THINGS TO COME



June 9-11

Arkansas Chapter, American College of Surgeons, Annual Meeting. Red Apple Inn, Heber Springs, Arkansas. Guest speaker will be Dr. Carl Almond, Chief of Surgery at the Medical University of South Carolina in Charleston.

For further information on the chapter's meetings, contact Dr. Samuel E. Landrum, chapter secretary, 522 South 16th, Fort Smith 72901.

The Southern Medical Association has announced the following seminar schedule:

Medical Malpractice Seminar, June 9-10, Marriott Hotel-West Loop, Houston, Texas. $220 for SMA members; $275 for nonmembers. For further information, contact Ms. Jeanette Stone,

Southern Medical Association, Post Office Box 2446, Birmingham, Alabama 35201; phone 205-323-4400.

Medical Staff Leadership Seminar, June 16-17, Westin Crown Center, Kansas City, Missouri. $220 for SMA members; $275 for nonmembers. For further information, contact Ms. Jeanette Stone, Southern Medical Association, Post Office Box 2446, Birmingham, Alabama 35201; phone 205-323-4400.

Regional Postgraduate Conference, August 19-21, Hyatt Regency, San Antonio, Texas. Attendants may select their own courses from a wide range of clinical courses. (4-hour and 6-hour courses available.) $15 per hour for SMA members; $22.50 per hour for nonmembers. For further information, contact Ms. Jeanette Stone, Southern Medical Association, Post Office Box 2446, Birmingham, Alabama 35201; phone 205-323-4400.



PERSONAL AND NEWS ITEMS

Dr. Araoz Speaks

Dr. Carlos Araoz of Little Rock spoke during the 17th Annual Junior Science and Humanities Symposium at Arkansas Tech University in March.

Dr. Talley Moves

Dr. Aubry Talley, formerly of Magnolia, has opened an office for the practice of Gynecology in the South Arkansas Professional Plaza at 403 West Oak in El Dorado.

Dr. Roy Speaks

Dr. F. Hampton Roy of Little Rock recently spoke to the Camden Kiwanis Club on the World Eye Foundation.

Dr. Newton Wins Election

Dr. Doane Newton of Hot Springs has been elected to a position on the Lakeside District School Board.

Dr. Fitzhugh Honored

Dr. A. Stuart Fitzhugh of Little Rock has been named "Public Citizen of the Year" by the Arkansas Chapter of the National Association of Social Workers.

Dr. Moore

Dr. Arthur Moore, Fayetteville, spoke at a meeting of the Fayetteville Chapter of the American Lupus Society on "Review on Lupus."

Dr. Golleher Appointed

Dr. James Golleher of Searcy has been appointed Liaison Associate of the Commission on Cancer Program at White County Memorial Hospital.

Drs. Green and McCoy Fellows

Drs. Terry G. Green and James R. McCoy of Searcy were inducted as Fellows of the American Academy of Orthopaedic Surgeons at the Fiftieth Anniversary Meeting of the Academy in Anaheim, California.

Dr. Hefner Closes Office

Dr. David P. Hefner closed his office at Mena in April.

Dr. Higginbothom Moves

Dr. William E. Higginbothom, Jr., formerly of Little Rock, has joined Dr. Henry B. Brandon for the practice of Urology at 2100 Green Acres Road, Suite A, in Fayetteville.

Dr. Monroe Speaks

Dr. Sanford C. Monroe of Pine Bluff spoke on "Changes in Medicine in the Past Fifty Years" at a meeting of the Jefferson County Medical Assistants.

Dr. Jennings

Dr. R. Duke Jennings of El Dorado has been elected a Fellow of the College of American Pathologists.

Dr. Anderson Guest Speaker

Dr. Charles Anderson of Pine Bluff was guest speaker for a recent worship service of the Dollarway Presbyterian Church in Pine Bluff.

Dr. Purcell Appointed

Dr. Donald Purcell of Paragould has been appointed to the State Hospital Board for a term expiring in January 1989. He replaces Dr. David Fried of Mena on the Board.

Dr. Boellner Reappointed

Dr. S. W. Boellner of Little Rock has been reappointed to the State Health Building Commission for a term expiring in January 1987.

Physicians Appointed

Three Hot Springs physicians have been appointed to the Ouachita Memorial Hospital Board of Directors. They are: Dr. James Griffin, Dr. Robert Clark and Dr. James Burton.

Drs. Dornenburg and Wilson Speak

Drs. Peter Dornenburg and John L. Wilson addressed a meeting of the Seventh Annual Workers' Compensation Institute in Little Rock.

Dr. Smith Serving As President

Dr. David E. Smith of Little Rock is serving a two-year term as president of the Harding University Alumni Association.

Dr. Scott Is Speaker

Dr. John G. Scott of Batesville spoke to the Batesville Rotary Club on the effects of a nuclear bomb.

Dr. Jackson Honored

Dr. Jabez Jackson of Newport was honored with the Paul Harris Fellowship Award by the Newport Rotary Club.

Dr. Brashears

Dr. Larry Brashears is seeking re-election to the Malvern School Board; he has been serving on the board for ten years.

Dr. Michaels Locates

Dr. Judy Michaels, a Pediatrician, has opened an office at 2515 College Avenue in Conway.

Dr. Hudson Honored

Dr. William Hudson of Jasper was honored on his 92nd birthday by the Newton County Medical Center.

Dr. Doss Named Chief

Dr. J. R. Doss has been elected to a two-year term as chief of staff at Conway Memorial Hospital. Serving with Dr. Doss will be Dr. William C. Roberts as chief of staff-elect, and Dr. J. J. Magie as secretary. Other staff officers are Dr. W. C. Furlow as chief of Medicine; Dr. Robert L. Clark as chief of Surgery; Dr. Paul McChristian as chief of Obstetrics; Dr. Margaret Beasley as chief of Anesthesia; Dr. James S. Garrison as chief of Radiology; Dr. Gene Singleton as chief of Pathology; Dr. Lander Smith as chief of Pediatrics; Dr. Richard O. Hendrickson as chief of Ophthalmology; and Dr. T. O. Beasley as chief of Emergency Services.

Drs. Roy and McDonald

Dr. F. H. Roy of Little Rock and Dr. J. E. McDonald, II, of Fayetteville have been elected to the board of the newly formed Indo-American Ophthalmology Society. The organization promotes cooperation on a variety of projects of American and Indian Ophthalmologists.



DR. CARL E. HOFFMAN

Dr. Hoffman, a new member of the Benton County Medical Society, was born in Fayetteville. His pre-med education was with Beloit College and the University of Arkansas. He received a Bachelor of Science degree in 1969. Dr. Hoffman is a 1973 graduate of the University of Arkansas College of Medicine.

Dr. Hoffman served with the United States Army from 1973 to 1977 and served his internship at Fitzsimons Army Medical Center in Denver. His residency training was with the University of Arkansas College of Medicine. Dr. Hoffman practiced in Coffeyville, Kansas, for eighteen months.

Dr. Hoffman is certified in Ophthalmology and is a fellow of the American Academy of Ophthalmology. His office for the practice of Ophthalmology is located at #1 Halsted Circle, Suite 5, in Rogers.

DR. JAMES BARNETT, JR.

Dr. Barnett is a new member of the Craighead-Poinsett County Medical Society. He was born in Jackson, Michigan. He served with the United States Army from 1968 to 1970.

Dr. Barnett received his Bachelor of Science degree in 1974 from Michigan State University

in East Lansing. He is a 1978 graduate of the University of Michigan Medical School in Ann Arbor. Dr. Barnett served his internship and Psychiatry residency at the University of Michigan Hospital.

Dr. Barnett is now associated with the George W. Jackson Mental Health Center at 2920 McClellan in Jonesboro.

DR. DONALD A. KOONE

Dr. Koone has been added to the membership roll of the Crawford County Medical Society. He was born in the Panama Canal Zone.

Dr. Koone was granted a Bachelor of Science degree from Tulane University in New Orleans in 1977. He was graduated from the University of Arkansas College of Medicine in 1981. His internship was with the University Hospital.

Dr. Koone is in Emergency Medicine practice with the Crawford County Memorial Hospital in Van Buren.

DR. D. M. HECHANOVA, JR.

Dr. Hechanova, a new member of the Garland County Medical Society, was born in Cadiz City, Philippines.

In 1949, Dr. Hechanova received Bachelor of Science and Bachelor of Arts degrees from the Philippine Union College. He has also received a Bachelor of Science in Education from the University of the Visayas. He is a 1964 graduate of the Manila Central University College of Medicine. Dr. Hechanova's internship and General Surgery residency were with the Manila Sanitarium and Hospital.

Dr. Hechanova moved to Michigan in 1972 and served a year of internship at the Borgess Medical Center in Kalamazoo. From 1974 to 1981, he was an Associate Professor of Health Education at Andrews University in Berrien Springs, Michigan.

Dr. Hechanova specializes in Family Practice. His office is located at 1315 Central Avenue in Hot Springs.

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The Howard-Pike County Medical Society has two new members:

DR. T. J. HUMPHREYS, JR.

Dr. Humphreys, a native of Fort Smith, received his Bachelor of Science degree from Arkansas State University in 1977. He is a 1981 graduate of the University of Arkansas College of Medicine. Dr. Humphreys served an internship with the Area Health Education Center of South Arkansas in El Dorado.

Dr. Humphreys specializes in Family Medicine. His office is located in the Doctors' Building at 900 Leslie in Nashville.

DR. TED H. PYE

Dr. Pye was born in El Paso, Texas. His premed education was at the University of Texas at El Paso. He was graduated from the University of Texas Medical Branch at Galveston in 1958.

After an internship with the Confederate Memorial Medical Center in Shreveport, Louisiana, Dr. Pye received residency training at the University of Texas Health Science Center in San Antonio. He also served as an instructor in Radiology at the University.

Dr. Pye has practiced at Doctors' Hospital in Alice, Texas, and at the Uvalde Memorial Hospital in Uvalde, Texas. He moved to Nashville in 1982.

Dr. Pye specializes in Diagnostic Radiology. His address is 1206 North 14th, Nashville.

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The Mississippi County Medical Society has six new members:

DR. FRANCIS J. FENAUGHTY

Dr. Fenaughty was born in Teaneck, New Jersey. He received a Bachelor of Science degree in Biology/Sociology from Albany State University in New York in 1976 and a Master of Science degree in Microbiology Studies from Rensselaer Polytechnic Institute in Troy, New York, in 1977. He was graduated from the Albany Medical College of Union University, New York, in 1981. His internship was with Albany Medical Center Hospital.

Dr. Fenaughty practices General Medicine. His office is located at 602 West Union, Suite B, in Osceola.

DR. THOMAS C. FLANNIGAN

Dr. Flannigan, a native of Monette, received a Bachelor of Science degree from Hendrix College at Conway in 1950. He was graduated from the University of Arkansas College of Medicine in 1958. His internship was with Mound Park Hospital in St. Petersburg, Florida.

Dr. Flannigan served with the United States Navy for two years. He has practiced in Arkansas for seventeen years and in Georgia for four years.

Dr. Flannigan specializes in Family Medicine. He has joined the Buffalo Island Medical Associates in Manila.

DR. JOSEPH O. JACOBSON

Dr. Jacobson was born in Baltimore, Maryland. He was graduated summa cum laude from Boston University, Massachusetts, in 1975 and was graduated cum laude from Boston University School of Medicine in 1959. His internship and residency training were with the University Hospital in Boston.

Dr. Jacobson, an Internist, is certified by the American Board of Internal Medicine. His office is located at 602 West Union in Osceola.

DR. FRANCISCO G. MORENO

Dr. Moreno was born in Havana, Cuba. He received a Bachelor of Science in chemical engineering from the University of South Carolina at Columbia in 1968.

Dr. Moreno is a 1976 graduate of the Louisiana State University School of Medicine in New Orleans. He completed a medical internship at Earl K. Long Memorial Hospital in Baton Rouge, Louisiana. He is board certified in Otolaryngology.

Dr. Moreno has served in the United States Army Reserve.

Before moving to Blytheville, he was associated with the Memphis Otolaryngology Group for fifteen months. He is a clinical instructor in the ENT Department of the University of Tennessee College of Medicine.

Dr. Moreno specializes in Otolaryngology. His office is at 620 West Walnut in Blytheville.

DR. STEPHEN R. RAULS

A native of Kennett, Missouri, Dr. Rauls practices Obstetrics-Gynecology in Blytheville. He was a member of the United States Naval Reserve from 1969 to 1975, with active duty from 1970 to 1972.

Dr. Rauls received his pre-med education at the University of Arkansas at Little Rock; he was graduated from the University of Arkansas College of Medicine in 1978. After an internship with the Confederate Memorial Hospital, Dr. Rauls received residency training at the Louisiana State University Medical Center in Shreveport. He served as Chief Resident of Obstetrics-Gynecology in 1981-1982.

Dr. Rauls is a Junior Fellow of the American College of Obstetrics and Gynecology. He is eligible for the board certification examination. Dr. Rauls practices at Suite "H" of the Medical Plaza, Tenth and Highland, Blytheville.

DR. MARGARET P. SETON

Dr. Seton, a native of Lower Newton Falls, Massachusetts, was graduated cum laude from Williams College in Williamstown, Massachusetts, in 1976. She is a 1980 graduate of the Medical College of Virginia in Richmond. Her internship and Internal Medicine training were with University Hospital in Boston.

Dr. Seton specializes in Internal Medicine. Her office is located at 22 Adams in Wilson.

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DR. CHARLES M. HARDEN

Dr. Harden is a new member of the Nevada County Medical Society. He was born in Baltimore, Maryland.

Dr. Harden received a Bachelor of Arts degree from Emory University in Atlanta in 1970. He served with the United States Army from October 1970 to January 1974.

In 1980, Dr. Harden received his medical degree from the Autonomous University of Guadalajara. He received further training in the Fifth Pathway program at the State University of New York at Buffalo School of Medicine. Dr. Harden served one year in an Internal Medicine residency with Sister's of Charity Hospital in Buffalo. Dr. Harden served as assistant clinical instructor at the State University of New York at Buffalo.

Dr. Harden practices General Medicine at 204 East Walnut Street in Gurdon. He also serves as a staff physician for the Arkadelphia Human Development Center.

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The Pope County Medical Society has added two members to its roll:

DR. WILLIAM G. BARRON

Dr. Barron, a native of Little Rock, received a Bachelor of Arts degree in Zoology from the University of Arkansas at Fayetteville. He is a 1978 graduate of the University of Arkansas College of Medicine. His internship was with the University Hospital. Dr. Barron served a Family Practice residency at the Area Health Education Center in Fort Smith. From 1981 to 1982, he was assistant director at the Center. He is a board certified Family Physician.

Dr. Barron specializes in Family Practice. His office is at 809 West Main in Russellville.

DR. V. ANTHONY HARDEN

Dr. Harden was born in Pine Bluff. His pre-med education was at the State College of Ar-

kansas in Conway. He is a 1977 graduate of the University of Arkansas College of Medicine.

From 1977 to 1981, Dr. Harden was in residency training for Anatomic and Clinic Pathology at the University.

Before moving to Russellville in 1982, Dr. Harden practiced in Donelson, Hendersonville and Lebannon, Tennessee. He is certified by the American Board of Pathology in Anatomical and Clinical Pathology.

Dr. Harden specializes in Anatomical and Clinical Pathology in Russellville. His office is located at 2207 West Main.

* * * *

The Pulaski County Medical Society has twelve new members:

DR. ROSEMARY C. BRANDT

Dr. Brandt was born in Conway and was graduated from Benton High School. Her pre-med education was with the University of Central Arkansas in Conway. She received a Bachelor of Arts degree. She is a 1957 graduate of the University of Arkansas College of Medicine. After an internship with Santa Rosa Hospital in San Antonio, Texas, Dr. Brandt practiced in Jacksonville and Little Rock.

Dr. Brandt received residency training in Psychiatry from 1963 to 1966 at the Arkansas State Hospital in Little Rock. She practiced in Wauwatosa, Wisconsin, from 1966 to 1968. She returned to Little Rock in 1970.

Dr. Brandt specializes in Psychiatry and is certified by the American Board of Psychiatry and Neurology. Her office is located at 500 South University in Little Rock.

DR. CAROL W. CHAPPELL

Dr. Chappell, a native of Akron, Ohio, received her Bachelor of Arts degree in 1968 from Wittenberg University in Springfield, Ohio. She was graduated from the University of Arkansas College of Medicine in 1974. Dr. Chappell served her internship and Ophthalmology residency at University Hospital in Little Rock. She is board certified in Ophthalmology.

Dr. Chappell joined the Alford Eye Clinic at 5700 West Markham in Little Rock in 1980 in the practice of Ophthalmology.

DR. STEVEN A. CLIFT

Dr. Clift was born in St. Louis, Missouri. He received his Bachelor of Arts degree from the University of Arkansas at Fayetteville in 1973 and his medical degree from the University of Arkansas College of Medicine in 1977.

From 1977 to 1980, Dr. Clift served an Internal Medicine internship and residency at the University. He held a fellowship in Gastroenterology at the University from 1980 to 1982. Dr. Clift is board certified in Internal Medicine.

Dr. Clift is associated with North Little Rock Gastroenterology, P.A., at 2000 Fendley Drive in North Little Rock.

DR. PAUL M. FISER

Dr. Fiser, a native of Russellville, received a Bachelor of Science degree with honors from Hendrix College in Conway in 1967. He is a 1971 graduate of the University of Arkansas College of Medicine.

Dr. Fiser served his internship at the Shands Teaching Hospital affiliated with the University of Florida College of Medicine in Gainesville. He was in training in Pediatrics and Pediatric Cardiology at the University of Florida from 1972 to 1974. From 1977 to 1979, he served a residency in Allergy and Immunology at Duke University Medical Center in North Carolina. Dr. Fiser is certified by the American Board of Pediatrics and the American Board of Allergy and Immunology.

Dr. Fiser specializes in Allergy and is associated with the Arkansas Allergy Clinic at 8500 West Markham in Little Rock. He is also an Assistant Professor of Pediatrics at the University of Arkansas College of Medicine.

DR. R. WHIT HALL

Dr. Hall was born in Little Rock. He received a Bachelor of Arts in chemistry from the University of Arkansas at Fayetteville in 1969. He was graduated from the University of Arkansas College of Medicine in 1973. Dr. Hall's Pediatrics internship and residency training were with the University Medical Center. He has practiced in Little Rock since completing his training.

Dr. Hall specializes in Pediatrics. His office is at 11215 Hermitage in Little Rock.

DR. THOMAS T. JEFFERSON

Dr. Jefferson, a native of Russellville, was graduated from Hall High in Little Rock in 1964. He received his Bachelor of Arts degree in 1968 from Hendrix College in Conway. Dr. Jefferson was graduated from the University of Arkansas College of Medicine in 1972. His internship and Pediatric residency were with the University Hos-

pital. He began practicing in Little Rock in 1975.

Dr. Jefferson practices Pediatrics at 11215 Hermitage in Little Rock.

DR. SUSAN A. KEATHLEY

Dr. Keathley was born in Heber Springs. In 1968, she received a Bachelor of Science degree from the University of Arkansas at Fayetteville. She is a 1972 graduate of the University of Arkansas College of Medicine. Dr. Keathley served her internship and residency in Pediatrics at the University. She began practice in 1975.

Dr. Keathley specializes in Pediatrics. Her office is at 11215 Hermitage Road in Little Rock.

DR. ROBERT LANDGREN

Dr. Landgren was born in St. Paul, Minnesota. He received his Bachelor of Arts degree from the University of Michigan in 1962. He is a 1966 graduate of the University of Michigan Medical School in Ann Arbor.

Dr. Landgren served a mixed medicine internship at the University of Wisconsin Hospital in Madison. Following the internship, he served two years with the United States Navy. From 1969 to 1971, he was an Internal Medicine resident with the University of Minnesota Affiliated Hospitals in Minneapolis. Dr. Landgren was a Fellow in Radiotherapy at the University of Texas, M. D. Anderson Hospital in Houston from 1971 to 1974.

Dr. Landgren specializes in Radiation Therapy. His office is at 500 South University in Little Rock.

DR. BRUCE LEIPZIG

A native of Syracuse, New York, Dr. Leipzig attended Columbia University in New York and received a Bachelor of Science degree in 1969. He was graduated from the State University of New York Upstate College of Medicine in Syracuse, New York, in 1973.

Dr. Leipzig received Surgery training at the Medical College of Virginia in Richmond from 1973 to 1975. He returned to New York for training in Otolaryngology at the Upstate Medical Center in Syracuse. In 1978-1979, he trained in Head and Neck Surgery at the University of Texas Medical Branch at Galveston.

Dr. Leipzig is board certified in Otolaryngology-Head and Neck Surgery. He practiced in Galveston, Texas, prior to moving to Little Rock.

Dr. Leipzig, an Otolaryngologist, is associated with the University of Arkansas College of Medicine.

DR. STEPHEN R. MARKS

Dr. Marks was born in Magnolia. Dr. Marks received a Bachelor of Arts degree in chemistry from Hendrix College at Conway in 1974. In 1978, he was graduated from the University of Arkansas College of Medicine. Dr. Marks trained in Obstetrics-Gynecology at the University.

Dr. Marks specializes in Obstetrics-Gynecology. His office is at 2000 Fendley Drive in North Little Rock.

DR. JAMES E. McDONALD

Dr. McDonald is a native of Jackson, Mississippi. He was graduated from the Mississippi College at Clinton in 1974 with a Bachelor of Science degree. He is a 1978 graduate of the University of Mississippi School of Medicine in Jackson.

Dr. McDonald received training in Pathology at the Louisiana State University School of Medicine in New Orleans. He served a Radiology residency with the Edward Mallinckrodt Institute of Radiology of the Washington University School of Medicine in St. Louis. Dr. McDonald was associated with Radiological Group, P.A., in Jackson before locating in Arkansas.

Dr. McDonald specializes in Radiology. His office is at 500 South University in Little Rock.

DR. EUGENE M. SHELBY

Dr. Shelby, a native of Muskogee, Oklahoma, specializes in Emergency Medicine.

He received an A.B. degree from Princeton University in New Jersey in 1973. Dr. Shelby was graduated from the University of Arkansas College of Medicine in 1977. He served a rotating internship at John Peter Smith Hospital in Fort Worth, Texas. Dr. Shelby served with the Peace Corps in Kinshasa, Zaire.

He now practices at St. Joseph's Hospital in Hot Springs and Memorial Hospital in North Little Rock.

* * * *

DR. NEIL E. CROW, JR.

Dr. Crow is a new member of the Sebastian County Medical Society. He was born in Hope.

Dr. Crow received a Bachelor of Arts degree from Texas Christian University in Fort Worth. He is a 1978 graduate of the University of Arkansas College of Medicine. His internship and residency training were at the University of New Mexico Affiliated Hospitals in Albuquerque. During his last year of residency, Dr. Crow also served as a lecturer in General Radiology and

Nuclear Medicine.

Dr. Crow specializes in Radiology. He is associated with Holt-Krock Clinic at 1500 Dodson in Fort Smith.

DR. JAMES S. DENEKE

Dr. Deneke, another new member of Sebastian County Medical Society, was born in Memphis, Tennessee.

In 1973, Dr. Deneke received a Bachelor of Science degree from Southern Methodist University in Dallas, Texas. He was graduated from the University of Arkansas College of Medicine in 1977. Dr. Deneke served his internship and Medicine residency at the University. From 1980 to 1982, he served a Rheumatology Fellowship at the University of Tennessee College of Medicine in Memphis. He is board certified in Internal Medicine.

Dr. Deneke specializes in Clinical Rheumatology. He is associated with Holt-Krock Clinic at 1500 Dodson in Fort Smith.

DR. ROBERT TOMMEY

Dr. Tommey, a native of Cleveland, Ohio, is a new member of the Union County Medical Society.

Dr. Tommey received a Bachelor of Arts in Chemistry from Baylor University in Waco in 1972. He is a 1976 graduate of the University of Arkansas College of Medicine. His internship was with the University of Arkansas and his General Surgery residency was with the University of Oklahoma Tulsa Medical College.

Dr. Tommey, a General Surgeon, is associated with the Surgical Clinic of South Arkansas at 412 North Washington in El Dorado.

DR. DAVID A. BUCKLEY

Dr. Buckley was born in Little Rock. He has joined the Washington County Medical Society.

Dr. Buckley is a graduate of the University of Arkansas at Fayetteville and a 1978 graduate of the University of Arkansas College of Medicine. He served his internship and Obstetrics-Gynecology residency at the Riverside Hospital in Newport News, Virginia.

Dr. Buckley has served as clinical physician for Peninsula Planned Parenthood of Hampton, Virginia, and clinic physician for the Arkansas State Health Department.

Dr. Buckley specializes in Obstetrics and Gynecology. He is associated with the Springdale Women's Clinic, P.A., at 206 South Blair in Springdale.

OBITUARY

DR. RAYMOND V. McCRAY

Dr. McCray of Malvern died March 18, 1983. He was born September 1, 1909.

Dr. McCray was a graduate of Hendrix College and a 1937 graduate of the University of Arkansas College of Medicine. His internship was at Charity Hospital in Shreveport, Louisiana. He returned to Malvern in 1939 and began practice with his father, the late Dr. E. H. McCray, and continued practicing until his retirement in 1981.

Dr. McCray was a veteran, Mason, Shriner and a member of First United Methodist Church. He was a former member of the Hot Spring County Memorial Hospital Board, the staff of Doctors Hospital in Little Rock, and the Malvern School Board.

Dr. McCray is survived by his wife, Lola Cunningham McCray, his son, Dr. David S. McCray of Little Rock, another son and four daughters.

ANSWER—Electrocardiogram of the Month

DISCUSSION: The electrocardiogram shows the patient to hove a P-wave rate of 83/minute ond o QRS rate of 52/minute. The QRS complexes ore 0.09 seconds in duratian, are regular, ond na QRS is initiated by a P-wave. Thus, the patient hos complete AV black with an idianodal rhythm. The presence af AV block, syncape, and brodycardia at an early age would make ane wonder about the possibility of cangenital complete heart black. One con muster enaugh Estes paints with S-wove omplitude in V_2 (34 mm), QRS duration (0.09 sec.), and ST shift to suggest left ventricular hypertraphy. Potients with complete block and normol left ventriculor function often have high systolic blood pressures, thus giving an abnormolly wide pulse pressure. Since atrial controctions are present but are related to the ventricular controctions in an inconsistent monner, S_1 moy well be voriable in intensity. "Connon o-woves" may be seen in the neck veins if the right atrium should hoppen to contract against a closed tricuspid volve. An S_4 could not be consistently heord. Becouse LVH may be present, there could well be either an abnormol charocter or on abnormal positian assaciated with the opicol impulse. Thus, 1., 3., and 4. are false while 2. and 5. ore true.

INDEX

JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 79

June, 1982 - May, 1983

(O) Original Article; (SP) Special Article; (OB) Obituary; (R) Resolution; (E) Editorial; (LE) Letter to Editor.

— A —

Abernathy, Robert S. (O) 130
Abramson, Lawrence J. (SP) 78
Adams, W. F. (OB) 155; (R) 250
Adenocarcinomas, Large Bowel, Chemotherapy and Combined Modality Therapy in the Management of (SP) 311
Ahmed, S. A. (SP) 80
Allergic Diseases, Diagnosis and Treatment (LE) 173
Ambulances as Emergency Vehicles (R) 17
American Medical Political Action Committee (SP) 181
Anderson, Paula J. (SP) 191
Ankle and Foot: One Year's Experience, Part I (O) 59
Antibiotics, Parenteral Cephalosporin, in Clinical Practice (O) 130
Arkansas Medical Society Membership Roster (SP) 255
Arkansas Medical Society Annual Meeting Program (SP) 376
Arkansas Medical Society House of Delegates (SP) 309
Asbury, Dale (O) 281
Ashcraft, Keith (SP) 158
Autorhythmometry — A New Concept in Biology and Health Education (O) 81
Auxiliary Convention Report (SP) 41; 160
Auxiliary Fall Board Meeting Minutes (SP) 251
Auxiliary Winter Board Meeting (SP) 361

— B —

Bailey, H. A. Ted, Jr. (O) 92
Baker, Bonnie J. (SP) 140
Baldwin, Michael H. (SP) 79
Barker, Charles L. (SP) 249
Barnett, James, Jr. (SP) 467
Barron, William G. (SP) 469
Bell, Robert S. (SP) 441
Berry, Danny T. (SP) 439
Berry, Robert L. (SP) 123
Berumen, Mike (SP) 249
Blanchard, Steven M. (SP) 307
Blankenship, D. Michael (SP) 361
Blue Thoughts (E) 426
Bond, Walter M. (SP) 80
Bonner, Steven (SP) 338
Bowel Disease, Nonspecific Inflammatory (E) 175
Bradley, Joe F. (SP) 189
Bradsher, Robert W. (O) 130
Brainard, Jay Owen (SP) 123
Brandt, Rosemary C. (SP) 470
Bressinck, Renie E. (SP) 79
Brown, Barry S. (O) 417
Bruce, Thomas A. (O) 81; (E) 455
Buchman, Joseph K. (O) 110
Buckley, David A. (SP) 472
Burke, Bryan L., Jr. (SP) 440
Busby, John V. (OB) 339; (R) 363
Byrne, William J. (O) 163

— C —

Cagle, Roger L. (SP) 103
Calhoun, Richard A. (SP) 158
Campylobacter Gastroenteritis in Arkansas (SP) 191
Cardiomyopathy, Congestive (E) 206
Carotid Endarterectomy — Five-Year Follow-Up (O) 105
Chambers, F. David (SP) 103
Changes in the Practice of Medicine in Arkansas Since 1925 (O) 107
Chappell, Carol W. (SP) 470
Chauhan, Mufiz A. (SP) 439
Chiropractic, AMS Policy Statement on (SP) 388
Christman, Daniel E. (SP) 338
Clift, Steven A. (SP) 470
Cochlear Implant: New Hope for the Totally Deaf (O) 92
Cole, John W. (OB) 120; (R) 153
College of Medicine, The, in 1983: Pride and Concern (E) 455
Committees of the Arkansas Medical Society 1982-1983 (SP) 217
Constitution and By-Laws Changes Approved at 1982 Meeting (SP) 26
Constitutional Amendments Presented for First Reading at 1982 Annual Session (SP) 24
Constitutional Amendment Presented for First Reading at 1983 Annual Session (SP) 385
Council Minutes (SP) 182, 211, 332, 434, 462
Council, Report of the (SP) 23, 387
Council, Supplemental Report of the (SP) 16
Councilors of the Arkansas Medical Society (SP) 36
Covey, M. Carl (SP) 217
Crawford, Perry F. (SP) 80
Cross, Joseph E. (OB) 361
Crow, Neil E., Jr. (SP) 471
Cystic Fibrosis, Diagnostic Testing in (SP) 451

— D —

Dean, Andrew G. (SP) 228
deMiranda, Federico C. (SP) 159
Denecke, James S. (SP) 472
DeRossitt, James P., III (SP) 219
Diabetes, Insulin-Dependent, in Pregnancy, The Management of (SP) 194
Diabetes, Insulin-Dependent Mellitus, Etiology Of: A Review of the Current Literature (O) 284
Drug Identification, AMS Policy Statement on (SP) 392
Drug Substitution, AMS Policy Statement on (SP) 393
Dungan, W. T. (SP) 167
Dwyer, Anthony P. (SP) 315

— E —

Education, Medical, The Role of Humanities in (O) 125
Elliott, Wayne G. (O) 56
Endarterectomy, Carotid, Five-Year Follow-Up (O) 105
Esophagus, Caustic Injuries of the (O) 341
Estes, Kent (SP) 191
Evoked Potentials in Clinical Medicine (E) 113

— F —

Farrell, Robert E. (SP) 159
Fat, Body, The Significance of Measuring, in Medical Practice (O) 417
Federal Trade Commission (SP) 69, 238, 300, 353
Fenaughty, Francis J. (SP) 468
Ferguson, E. Scott (SP) 339
Fetal Constriction Rings (SP) 172
Fever, Rocky Mountain Spotted, in Arkansas, A Five Year Update (O) 50
Fever, Typhoid, A Review of Reported Cases and Documented Carriers in Arkansas (O) 47
Fifty Year Club Makes Presentation (SP) 118
Fiser, Paul M. (SP) 470
Fitzhugh, A. S. (SP) 79
Flannigan, Thomas C. (SP) 468
Florez, James Patrick (SP) 217
Foot and Ankle: One Year's Experience, Part I (O) 59
Forestiere, Lee A. (SP) 338

Freedom of Choice, AMS Policy Statement on (SP) 396
From Other Years (SP) 69, 99, 114, 148, 177, 207, 238, 298, 331, 352, 427, 456

— G —

Gastroenteritis, Campylobacter, in Arkansas (SP) 191
Gastroenteritis, Viral, in Infants (O) 163
Gavlas, Frank E. (OB) 104
Glasgow, Dennis R. (O) 81
Glaucoma, New Uses of the Argon Laser for : Laser Iridectomy and Laser Trabeculoplasty (O) 445
Glaucoma, Open-Angle, A New Treatment for, Another Use of the Laser (O) 422
Go, Kong Hua Lim (SP) 78
GO! VMO! (SP) 137
Golden, Stephen C. (SP) 307
Goldmann Perimetry Versus Tangent Screen: The Difference in 104 V.A. Hospital Glaucoma Patients/Suspects (O) 344
Golladay, E. S. (O) 341
Goodin, W. H., Jr. (SP) 189
Graham, Sharon S. (O) 92
Gresham, Edward A. (O) 47; (SP) 248
Grimes, Alfred H. (SP) 440
Grimes H. Austin (SP) 424

— H —

Hackler, Keith (SP) 441
Hall, Eric E. (SP) 361
Hall, R. Whit (SP) 470
Hand, The—Infected Flexor Tendon Sheath (SP) 450
Harden, Charles M. (SP) 169
Harden, V. Anthony (SP) 469
Harmon, Harvey C. (SP) 78
Harrell, Robert E., Jr. (SP) 123
Harris, Michael N. (OB) 339; (R) 363
Hayes, Richard L. (SP) 308
Heart Disease, Congenital, Prostaglandin E1 in Neonates with Critical (SP) 167
Heart Failure and Vasodilators (E) 147
Heart, Pertaining to the (E) 236
Heart Transplantation (SP) 221
Hechanova, D. M., Jr. (SP) 468
Heffington, Reva (SP) 451
Henry, Morriss M. (O) 422
Hepatologica (E) 329
Hicks, David C. (SP) 123
Hill, Edward B. (SP) 361
Hip Pain (SP) 348
Hoffman, Carl E. (SP) 467
Hopkins, Ed G., Jr. (OB) 216
House of Delegates, Business Affairs (SP) 1, 18, 309, 384
Howe, H. Joe (SP) 307
Howell, Coburn (O) 105
Hubener, L. L. (OB) 188, 216
Humphreys, T. J., Jr. (SP) 468
Husted, Scott (SP) 103

— I —

Injuries, Runners', About the Knee (SP) 200

— J —

Jacobson, Joseph O. (SP) 469
Jayasundera, Naomal J. (SP) 360
Jefferson, Thomas T. (SP) 470
Johnson, Philip H. (SP) 349
Jones, Brenda (SP) 451
Jones, Gilbert, III (SP) 338
Jones, Kenneth G. (SP) 172, 450
Jouett, Ray (O) 105

— K —

Kahn, Alfred, Jr. (E) 67, 98, 113, 147, 175, 206, 237, 296, 329, 351, 426
Kalderon, Albert E. (O) 281; (OB) 362
Keathley, Susan A. (SP) 471
Kemp, C. L. (SP) 439
Kendrick, John H. (SP) 249
Kinley, James D. (OB) 104
Knee, Runners' Injuries About the (SP) 200
Knight, Richard (SP) 78
Koone, Donald A. (SP) 468
Kordan, Bernard (SP) 189
Kovaleski, Thomas M. (SP) 123

— L —

Landgren, Robert (SP) 471
Lane, Charles S., III (SP) 360
Laney, J. Neal (OB) 77
Laser, Another Use of the, A New Treatment for Open-Angle Glaucoma (O) 422
Laser Iridectomy and Laser Trayeculoplasty: New Uses of the Argon Laser for Glaucoma (O) 445
Leavelle, Ray W. (SP) 78
Leibovich, Marvin (SP) 124
Leipzig, Bruce (SP) 471
Lepore, Diane G. (SP) 308
Lewis, James S. (SP) 339
Lewis, Rick J. (SP) 190
Limb Amputation Surgery, General Principals of (SP) 235
Lipsmeyer, Eleanor A. (SP) 63
Livingston, Billy B. (OB) 361
Lofgren, J. P. (O) 50
Logue, Richard M. (OB) 250; (R) 303

— Mc —

McAtee, Rebecca (SP) 191
McCarthy, Richard E. (SP) 315
McChesney, T. C. (O) 50
McCray, Raymond V. (OB) 472
McDonald, James E. (SP) 471
McNair, James R. (O) 417

— M —

MacKercher, Peter A. (SP) 439
Mansouri, Ali (O) 323
Marks, Stephen R. (SP) 471
Martin, Albert E. (SP) 338
May, John (SP) 191
Mayer, Suzanne G. (SP) 228
Medical Grand Rounds (SP) 63, 141, 323
Medical Science — The American Crucible (E) 97
Medicine and the Environment (E) 48
MEFFA Lecture Series (SP) 182
Melton, C. G. (SP) 78
Metatarsalgia (O) 424
Meyers, James Mark (SP) 248
Millard, I. Leighton (SP) 59, 235
Mills, Gwen F. (SP) 140
Mitchell, Bob G. (SP) 80
Mollitt, Daniel L. (O) 341
Moore, Walter M. (SP) 307
Moreno, Francisco G. (SP) 469
Morrissy, Raymond T. (SP) 315
Moulton, Everett C., III (O) 291
Murphy, Kenneth (SP) 158
Muylaert, Michel (SP) 124
Myeloma, Multiple, A Brief Review (O) 323
Myocardial Infarction, Uncomplicated, Management of the (SP) 140

— N —

Narain, J. P. (O) 50
Nelson, Steve B. (SP) 217
Nephritis, Interstitial, Goldberg's Discussion on (E) 351

Nix, Richard A. (SP) 159, 200
Nominating Committee, Report of the (SP) 384
Nonspecific Inflammatory Bowel Disease (E) 175
Northcutt, Carl E. (O) 420
Norton, J. B., Jr. (SP) 167

— O —

Office Orthopaedics (SP) 59, 136, 172, 200, 235, 319, 348, 424, 450
Officers of County Medical Societies — 1982 (SP) 37
Officers of the Arkansas Medical Society — 1982-83 (SP) 2, 35

— P —

Pancreas, Inflammation of the (E) 296
Panettiere, Frank J. (O) 311
Pappas, James J. (O) 92
Parenteral Cephalosporin Antibiotics in Clinical Practice (O) 130
Parker, Douglas W., Jr. (SP) 338
Patient Medication Instruction Program (SP) 302
Pauly, John E. (O) 81
Peckham, Richard W. (SP) 361
Pediatrics (SP) 451
Peptic Ulcer, Perforated, Simple Closure Versus Definitive Surgical Treatment of the (O) 110
Physician Advertising (SP) 69
Pierce, Ruston Y. (SP) 361
Practice of Medicine in Arkansas, Changes in the, Since 1925 (O) 107
President's Address (SP) 8
President's Inaugural Address (SP) 32
Proceedings of the 106th Annual Session of the Arkansas Medical Society (SP) 1
Proffitt, Danny L. (SP) 159
Prostaglandin E1 in Neonates with Critical Congenital Heart Disease (SP) 167
Psychiatric Association Statement on Insanity Defense (SP) 431
Psychiatric Emergencies, Treating, in Arkansas (O) 286
Pye, Ted H. (SP) 468

— Q —

Quevillon, Robert D. (SP) 440

— R —

Rape, AMS Policy Statement on (SP) 390
Rauls, Stephen R. (SP) 469
Raynaud's Syndrome (SP) 63
Readinger, R. I. (SP) 167
Reid, Gene W. (O) 286
Resolution: Ambulances as Emergency Vehicles (R) 17
Rhinehart, William J. (OB) 188; (R) 216
Riley, Warren S. (OB) 104
Robinson, Ronald P. (SP) 440
Rocky Mountain Spotted Fever in Arkansas, A Five Year Update on (O) 50
Rolufs, Lloyd S. (OB) 188
Rozeboom, Victor A. (SP) 78
Rubella Susceptibility in South Arkansas (O) 56

— S —

Scarlett, William P. (O) 107
Scheving, Lawrence E. (O) 81
Schock, Charles C. (SP) 319
Schroeder, George T. (O) 445
Scoliosis, Adolescent Idiopathic, Progress in the Treatment of (SP) 319
Scoliosis School Screening in Arkansas (SP) 315
Second Opinion, AMS Policy Statement on (SP) 394
Seton, Margaret P. (SP) 469
Shelby, Eugene M. (SP) 471
Shelton, Wayne (O) 125
Shock, John P. (O) 344
Shultz, Sam L. (SP) 79
Shumway, Norman E. (SP) 221
Smith, Charles E. (SP) 217
Smith, Michael (SP) 248
Smith, Terrald J. (SP) 249
Sorrells, R. Barry (SP) 137
Sotomora, R. F. (SP) 167
Spinks, Debbie (SP) 191
Statewide Health Information System: A Physician-Based, One Year's Experience (SP) 228
Stearns, David E. (SP) 440
Steinkamp, Ruth C. (R) 104
Sterilization, Female, Reversal of, A Review (O) 443
Stockley, Susan M. (SP) 159
Sullivan, Jan R. (SP) 159

— T —

Thomas, Wally (E) 97
Thompson, Steven (O) 163
Thrombophlebitis, Acute, During Pregnancy, Treatment Protocol for (O) 420
Tice, Howard L. (SP) 249
Tobacco, AMS Policy Statement on (SP) 390
Tommey, Robert (SP) 472
Tuangsithtanon, Theerasak (SP) 360
Typhoid Fever, A Review of Reported Cases and Documented Carriers in Arkansas (O) 47

— U —

University of Arkansas for Medical Sciences, Additions to Staff (SP) 244

— V —

Vascular Disease (E) 67
Vasodilators and Heart Failure (E) 147
Vesely, David L. (SP) 194
Vichugsananon, Niponth (SP) 158
Villines, Gary W. (SP) 103
Viral Gastroenteritis in Infants (O) 163
Vitrectomy, A Valuable Means for the Restoration of Vision in Blind Eyes (O) 291
VMO!, GO! (SP) 137

— W —

Wade, Billy K. (SP) 440
Wallis, Charles (OB) 442; (R) 463
Walls, Robert C. (O) 47
Warren, Robert H. (SP) 451
Webster, Kathryn M. (SP) 194
Westerman, G. Richard (SP) 79
White, John V. (SP) 189
White, Paul C., Jr. (O) 47, (SP) 228
White, Mark E. (SP) 228
Whittle, James L. (SP) 140
Whittaker, L. A. (OB) 250, (R) 250, 333
Wilkes, T. David I. (SP) 248
Wood, Gary P. (O) 443
Woodruff, Stephen O. (SP) 307
Wright, Harold B. (OB) 188
Wright, Ruel N. (SP) 159
Wyatt, Finis Q. (OB) 77; (R) 122

— Y —

Young, Tim (SP) 159

— Z —

Zalta, Alan H. (O) 344

PHYSICIANS' DIRECTORY

HOT SPRINGS GASTROENTEROLOGY CLINIC, P.A.

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Diplomate, American Board of Internal Medicine
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